

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Patent Application of

Confirmation No.: 1055

Yuka HASEGAWA

Date: August 25, 2006

Serial No.: 10/821,477

Group Art Unit: 2643

Filed: April 8, 2004

Examiner: Melur Ramakrishnaiah

For: A VIDEOPHONE TERMINAL, A VIDEOPHONE SYSTEM, AND A SCREEN
DISPLAY SETTING METHOD THEREFOR

VIA EFS-WEB

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. §41.37

Sir:

This appeal is taken from the final rejection of the Primary Examiner of claims 1-24 in the final Office Action mailed on February 1, 2006.

I. Real Party in Interest

The real party in interest is NEC Corporation, the assignee of record.

II. Related Appeals and Interferences

The applicant, the applicant's undersigned attorney, and the assignee of record are not aware of any related appeals and interferences.

III. Status of Claims

Claims 1-24 are pending and on appeal herein.

Claims 1-24 have been rejected.

IV. Status of Amendments

An Amendment After Final/Submission was filed on April 18, 2006 containing arguments regarding the patentability of the claims, but not amending the claims. The Amendment was filed after the final rejection of February 1, 2006. In response, the Examiner mailed an Advisory Action on May 23, 2006 stating that the request for reconsideration was considered but did not place the application in condition for allowance, setting forth the reasons for that statement in the Advisory Action.

V. Summary of Claimed Subject Matter

Independent claim 1 claims a videophone terminal, (specification, page 11, lines 2-19; drawings, Fig. 1, Ref. Nos. 1a, 1b), imaging means, (specification, page 11, line 28; drawings, Fig. 2, Ref. No. 15), a microphone, (specification, page 11, line 30, to page 12, line 1, page 14, lines 7-8; drawings, Fig. 2, Ref. No. 18), display means, (specification, page 11, line 25, page 13, lines 9-10, 16-19; drawings, Fig. 2, Ref. No. 12), a communicating means (specification, page 11, lines 28-29; drawings, Fig. 2, Ref. No. 16), storage means for storing a telephone book table, (specification, page 11, lines 29-30, page 12, lines 11-20; drawings, Fig. 2, Ref. No. 17), and control means at reception of a call from a communicating terminal to prepare a reply from the videophone terminal to the communicating terminal according to a reply method related to a telephone number of the communicating terminal in the telephone book table, (specification, page 11, lines 26-28, page 13, line 29, to page 14, line 5; drawings, Fig. 2, Ref. No. 14), the reply method including a reply using any one of a camera image, a still image, or a substitute image, (specification, page 13, line 2, to page 14, line 5).

Independent claim 8 provides for a screen display setting method for use with a videophone terminal, including imaging means, a microphone, display means, and a communicating means, for conducting a call with a communicating terminal, the method comprising: a reply setting step of relating in a telephone book table a telephone number of a communicating terminal to a reply method at reception of a call according to an input from an input means, (specification, page 17, lines 12-17; drawings, Fig. 8, Ref. No. S23), and a reply step of conducting control at reception of a call from a communicating terminal to prepare a reply

from the videophone terminal to the communicating terminal according to a reply method related to a telephone number of the communicating terminal in the telephone book table, (specification, page 17, lines 17-21, 26-29; page 17, line 30, to page 18, line 5; page 18, lines 7-11; drawings, Fig. 8, Ref. Nos. S24, S25, S26), the reply method including a reply using any one of a camera image, a still image, or a substitute image.

Independent claim 13 provides for a videophone system including a plurality of videophone terminals, each videophone terminal including imaging means, a microphone, display means, and a communicating means, wherein the videophone terminal includes: storage means for storing a telephone book table and control means for conducting control at reception of a call from a communicating terminal to prepare a reply from the videophone terminal to the communicating terminal according to a reply method related to a telephone number of the communicating terminal in the telephone book table, the reply method including a reply using any one of a camera image, a still image, or a substitute image.

Independent claim 20 provides for a screen display setting method for use with a videophone system including a plurality of videophone terminals for conducting a call between the videophone terminals, each videophone terminal including imaging means, a microphone, display means, and a communicating means, the method comprising: a reply setting step of relating, according to an input from an input means of one videophone terminal selected from the videophone terminals, a telephone number of a communicating terminal in a telephone book table to a reply method at reception of a call by the videophone terminal selected from the videophone terminals; and a reply step of conducting control by the videophone terminal at reception of a call from a communicating terminal to prepare a reply to the communicating terminal according to a reply method related to a telephone number of the communicating terminal in the telephone book table, the reply method including a reply using any one of a camera image, a still image, or a substitute image.

VI. Grounds of Rejection to be Reviewed on Appeal

1. Whether claims 1-2 and 13-14 are unpatentable under 35 U.S.C. §103(a) as being unpatentable over Sato et al., U.S. Patent No. 6,515,695, in view of Nishimura, JP 07-115633.

2. Whether claims 8-9 and 20-21 are unpatentable under 35 U.S.C. §102(b) as being anticipated by Nishimura.

3. Whether claims 3-7 and 15-19 are unpatentable under 35 U.S.C. §103(a) as being unpatentable over Sato et al. in view of Nishimura and further in view of Saiki et al., JP 11-234641.

4. Whether claims 10-11 and 22-23 are unpatentable under 35 U.S.C. §103(a) over Nishimura in view of Saiki et al.

5. Whether claims 12 and 24 are unpatentable under 35 U.S.C. §103(a) over Nishimura in view of Nakajima, JP2003032727A.

VII. Argument

A. Rejection under 35 U.S.C. §103(a) over Sato et al. in view of Nishimura of Claims 1-2 and 13-14

Both independent claims 1 and 13 provide for, “control means for conducting control at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table stored in the storage means, the reply method including a reply using any one of a camera image, a still image, or a substitute image.”

The Examiner contends that Sato et al. discloses “a control means ... for conducting control at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table stored in the storage means,” (Office Action mailed on February 1, 2006 (hereinafter referred to as the “the Office Action”), page 2, paragraph 2, lines 11-15), citing column 7, line 30 to column 8, line 34; column 10, line 1, to column 11, line 26; column 14, line 14, to column 15, line 21; column 16, line 50, to column 17, line 47; Figs. 1, 2, 4 of Sato et al. However, none of the cited portions of Sato et al. disclose, teach, or suggest either conducting control at reception of a call or a reply method related to a telephone number of the

communicating terminal. On the contrary, all of the cited portions of Sato et al., and, indeed, all of Sato et al. focuses on the multimedia communications terminal making outgoing calls, and there is no disclosure, teaching, or suggestion of the procedures for conducting control at reception of a call or reply methods at reception of a call, as required in independent claims 1 and 13.

The Examiner admits that Sato et al. does not teach the feature of the reply method including any one of a camera image, a still image, or a substitute image, found in independent claims 1 and 13, but contends that Nishimura discloses a “video telephone system which teaches the following: the reply method including a still image (abstract; paragraphs: 0006, 0010-0016),” (Office Action, page 3, lines 3-6). In the Advisory Action mailed on May 23, 2006, the Examiner inconsistently contends that “Nishimura discloses a video telephone in which reply method including [sic] a reply using any one of camera image, or still image,” (page 3, lines 5-7).

Applicant respectfully disagrees regarding the Examiner’s interpretation of Nishimura. First, Nishimura nowhere discloses, teaches, or suggests a still image or camera image; images only are referred to. Second, even if an inference is possible to interpret Nishimura as directed toward still or camera images, which is denied, such an inference still does not anticipate the feature of the reply method including a reply using any one of a camera image, a still image or substitute image. The Examiner’s contention that a still or camera image is disclosed by Nishimura still covers only two of the choices of the reply method claimed in independent claims 1 and 13. To say that two choices of a reply method will be sufficient to anticipate the reply method as claimed in independent claims 1 and 13 would be to interpret the phrase “any one” in both independent claims 1 and 13 as being equivalent to “one.” That would render the word “any” meaningless. It is respectfully submitted that the phrase “any one” should be interpreted to require that the reply method include a reply using a camera image, a reply using a still image, and a reply using a substitute image.

Finally, there is no motivation for one of ordinary skill in the art to combine Nishimura with Sato et al. since, as previously stated, Sato et al. only teaches, discloses, and suggests a process of using a multimedia communications terminal to make outgoing calls, whereas Nishimura discloses the use of a video telephone system in response to incoming calls, (abstract).

Since claim 2 is directly dependent upon independent claim 1, and claim 14 is directly dependent upon independent claim 13, claims 2 and 14 are allowable over Sato et al. in view of Nishimura for the same reasons recited above with respect to the allowability of independent claims 1 and 13, respectively, over Sato et al. in view of Nishimura.

B. Rejection under 35 U.S.C. §102(b) over Nishimura of Claims 8-9 and 20-21

Independent claim 8 provides for, “a reply step of conducting control at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table, the reply method including a reply using any one of a camera image, a still image, or a substitute image.”

Independent claim 20 provides for, “a reply step of conducting control by the videophone terminal at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table, the reply method including a reply using any one of a camera image, a still image, or a substitute image.”

The Examiner contends that both features of independent claims 8 and 20 recited above are found in drawing Figures 1-8, the abstract, or in paragraphs 0006 to 0016 of Nishimura, (Office Action, page 5, lines 5-11; page 5, line 21 to page 6, line 5). As stated previously, however, Nishimura only discloses the use of images in replies and does not specify the use of any one of a camera image, a still image, or a substitute image in a reply, as required by independent claims 8 and 20.

Since claim 9 is directly dependent upon independent claim 8, and claim 21 is directly dependent upon independent claim 20, claims 9 and 21 are allowable over Nishimura for the same reasons recited above with respect to the allowability of independent claims 8 and 20, respectively, over Nishimura.

C. Rejection under 35 U.S.C. §103(a) over Sato et al. in view of Nishimura and further in view of Saiki et al., JP 11-234641, of Claims 3-7 and 15-19

Since claims 3-7 are directly or indirectly dependent upon independent claim 1, and claims 15-19 are directly or indirectly dependent upon independent claim 13, claims 3-7 and 15-19 are allowable over Sato et al. in view of Nishimura for the same reasons recited above with respect to the allowability of independent claims 1 and 13, respectively, over Sato et al. in view of Nishimura.

With respect to Saiki et al., Applicant respectfully disagrees with the Examiner's analysis. Specifically, although Saiki et al. discloses an image storage, which memorizes image data from image decoding equipment or image data for transmission, (page 2 of English translation of Saiki et al. provided by the Examiner, lines 4-5), there is no disclosure, teaching, or suggestion of a "substitute image expressing a feature of a movement in an image shot by the imaging means" by "a movement of a character beforehand set," as claimed in claims 3 and 15, and, thus, in claims 4-7 and 16-19, to the extent that claims 4-7 and 16-19 are directly or indirectly dependent upon claims 3 and 15, respectively.

To the extent that claim 6 is directly or indirectly dependent upon independent claim 1, and claim 18 is directly or indirectly dependent upon claim 13, Saiki et al., although it discusses sending image data selected manually or automatically to another party, nowhere teaches, discloses, or suggests a reply method including a reply using any one of a camera image, a still image, or a substitute image, as required by claims 1 and 13.

C. Rejection under 35 U.S.C. §103(a) over Nishimura in view of Saiki et al. of Claims 10-11 and 22-23

Since claims 10-11 are directly or indirectly dependent upon independent claim 8, and since claims 22-23 are directly or indirectly dependent upon independent claim 20, claims 10-11 and 22-23 are allowable over Nishimura for the same reasons recited above with respect to the allowability of independent claims 8 and 20, respectively, over Nishimura.

With regard to Saiki et al., both claims 10 and 22, and, therefore, also claims 11 and 23, dependent upon claims 10 and 22, respectively, require that a substitute image expresses "a

feature of a movement in an image shot by the imaging means by a movement of a character beforehand set,” analogously to claims 3 and 15, and, therefore, claims 10-11 and 22-23 are allowable over Saiki et al. for the same reasons recited above with respect to claims 3 and 15.

D. Rejection under 35 U.S.C. §103(a) over Nishimura in view of Nakajima, JP2003032727A of Claims 12 and 24

Since claim 12 is indirectly dependent upon independent claim 8, and claim 24 is indirectly dependent upon independent claim 20, claims 12 and 24 are allowable over Nishimura for the same reasons recited above with respect to the allowability of independent claims 8 and 20, respectively, over Nishimura.

With regard to Nakajima, it relates to the downloading and display of image data on an image display means, (abstract), and does not teach, disclose, or suggest control at reception of a call from a communicating terminal according to a reply method related to a telephone number of the communicating terminal, the reply method including a reply using any one of a camera image, a still image, or a substitute image, as required in independent claims 8 and 20, and, therefore, in dependent claims 12 and 24.

VIII. Conclusion

Credit card payment in the amount of \$500.00 to cover the 37 C.F.R. §41.20(b)(2) fee for filing an Appeal Brief is submitted via EFS-WEB. Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademark Office Deposit Account No. 15-0700. Applicant reserves the right to request an oral hearing upon receipt of the Examiner’s Answer.

If this Appeal Brief is filed after the two-month time period for filing an Appeal Brief, from the date of filing the Notice of Appeal has elapsed, and no separate Petition is enclosed, the Commissioner of Patents and Trademarks is petitioned, under 37 C.F.R. §1.136(a), to extend the time for filing the Appeal Brief by the number of months which will avoid abandonment under 37 C.F.R. §1.135. The fee under 37 C.F.R. §1.17 should be charged to our Deposit Account No. 15-0700.

In the event the actual fee is greater than the payment submitted or is inadvertently not enclosed or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge the underpayment to Deposit Account No. 15-0700.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE PATENT AND
TRADEMARK OFFICE EFS FILING
SYSTEM ON August 25, 2006.

MM/MIM:lac:ck

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CLAIMS APPENDIX

The claims on appeal are:

1. A videophone terminal for conducting a call with a communicating terminal by communicating voice and sound and an image, comprising:

imaging means for shooting an image;

a microphone for converting voice and sound into an electric signal;

display means for displaying a screen image;

a communicating means for communicating a call;

storage means for beforehand storing a telephone book table including a telephone number of a communicating terminal and a reply method at call reception with a relationship established therebetween; and

control means for conducting control at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table stored in the storage means,

the reply method including a reply using any one of a camera image, a still image, or a substitute image.

2. A videophone terminal in accordance with claim 1, wherein:

the telephone book table relates a telephone number of a communicating terminal to a reply method to send a reply as an answering telephone; and

the control means makes at reception of a call, when an answering reply mode to send a reply as an answering telephone is set in advance, a search through the telephone book table and transmits, when the telephone number of the communicating terminal of the call is related to a reply method as an answering telephone, an image and voice and sound to the communicating terminal according to the reply method.

3. A videophone terminal in accordance with claim 1 or 2, wherein:

the reply method includes a reply using the substitute image expressing a feature of a

movement in an image shot by the imaging means by a movement of a character beforehand set;
and

the control means includes a substitute image display control section for converting the image shot by the imaging means into the substitute image.

4. A videophone terminal in accordance with claim 3, wherein:

the reply using the substitute image includes a reply using voice and sound corresponding to the substitute image; and

the substitute image display control section converts voice and sound from the microphone into voice and sound corresponding to the substitute image.

5. A videophone terminal in accordance with claim 3, wherein:

the communicating means includes a function to establish connection to a network; and data is obtained for the character via the network from the communicating means and is stored in the storage means.

6. A videophone terminal in accordance with one of claims 1, 2, 4 and 5, wherein:

the reply method includes a reply using the camera image shot by the imaging means and a reply using the still image;

the control means includes:

camera image display control section for displaying the camera image shot by the imaging means; and

a still picture display control section for displaying the still image using an image stored in the storage means.

7. A videophone terminal in accordance with claim 3, wherein:

the reply method includes a reply using an image shot by the imaging means and a reply using the still image;

the control means includes:

camera image display control section for displaying the camera image shot by the imaging

means; and

a still picture display control section for displaying the still image using an image stored in the storage means.

8. A screen display setting method for use with a videophone terminal for conducting a call with a communicating terminal by communicating voice and sound and an image including imaging means for shooting an image, a microphone for converting voice and sound into an electric signal, display means for displaying a screen image, and a communicating means for communicating a call, the method comprising:

a reply setting step of relating in a telephone book table a telephone number of a communicating terminal to a reply method at reception of a call according to an input from an input means; and

a reply step of conducting control at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table,

the reply method including a reply using any one of a camera image, a still image, or a substitute image.

9. A screen display setting method according to claim 8, further comprising:

an answering reply setting step of relating in a telephone book table a telephone number of a communicating terminal to a reply method of sending a reply as an answering telephone to the communicating terminal according to an input from an input means; and

an answering reply step of conducting control, at reception of a call from a communicating terminal in a state in which the videophone terminal is beforehand set to reply as an answering telephone, to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method as an answering telephone related to a telephone number of the communicating terminal in the telephone book table.

10. A screen display setting method according to claim 8 or 9, wherein the reply method includes a reply using the substitute image expressing a feature of a movement in an image shot by the imaging means by a movement of a character beforehand set.

11. A screen display setting method according to claim 10, wherein the reply using the substitute image includes a reply using voice and sound corresponding to the substitute image.

12. A screen display setting method according to claim 10, wherein the communicating means includes a function to establish connection to a network, the method further comprising a character obtaining step of obtaining data for the character via the network from the communicating means and storing the data in storage means,

the character obtaining step being disposed before the reply setting step and the answering reply setting step.

13. A videophone system including a plurality of videophone terminals for conducting a call by communicating voice and sound and an image between the videophone terminals, each videophone terminal including imaging means for shooting an image, a microphone for converting voice and sound into an electric signal, display means for displaying a screen image, and a communicating means for communicating a call, wherein the videophone terminal includes:

storage means for beforehand storing a telephone book table including a telephone number of a communicating terminal and a reply method at call reception with a relationship established therebetween; and

control means for conducting control at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table stored in the storage means,

the reply method including a reply using any one of a camera image, a still image, or a substitute image.

14. A videophone system according to claim 13, wherein:

the telephone book table relates a telephone number of a communicating terminal to a reply method of sending a reply as an answering telephone; and

the control means makes, at reception of a call in a state in which the videophone terminal is set to reply as an answering telephone in advance, a search through the telephone book table and transmits, when the telephone number of the communicating terminal of the call is related to a reply method as an answering telephone, an image and voice and sound to the communicating terminal according to the reply method.

15. A videophone system in accordance with claim 13 or 14, wherein:

the reply method includes a reply using the substitute image expressing a feature of a movement in an image shot by the imaging means as a movement of a character beforehand set; and

the control means includes a substitute image display control section for converting the image shot by the imaging means into the substitute image.

16. A videophone system in accordance with claim 15, wherein:

the reply using the substitute image includes a reply using voice and sound corresponding to the substitute image; and

the substitute image display control section converts voice and sound from the microphone into voice and sound corresponding to the substitute image.

17. A videophone system in accordance with claim 15, wherein:

the communicating means includes a function to establish connection to a network; and data is obtained for the character via the network from the communicating means and is stored in the storage means.

18. A videophone system in accordance with one of claims 13, 14, 16 and 17, wherein:

the reply method includes a reply using the camera image shot by the imaging means and a reply using the still image;

the control means includes:
camera image display control section for displaying the camera image shot by the imaging means; and
a still picture display control section for displaying the still image using an image stored in the storage means.

19. A videophone system in accordance with claim 15, wherein:
the reply method includes a reply using the camera image shot by the imaging means and a reply using the still image;
the control means includes:
camera image display control section for displaying the camera image shot by the imaging means; and
a still picture display control section for displaying the still image using an image stored in the storage means.

20. A screen display setting method for use with a videophone system including a plurality of videophone terminals for conducting a call by communicating voice and sound and an image between the videophone terminals, each videophone terminal including imaging means for shooting an image, a microphone for converting voice and sound into an electric signal, display means for displaying a screen image, and a communicating means for communicating a call, the method comprising:

a reply setting step of relating, according to an input from an input means of one videophone terminal selected from the videophone terminals, a telephone number of a communicating terminal to a reply method at reception of a call in a telephone book table by the videophone terminal selected from the videophone terminals; and

a reply step of conducting control by the videophone terminal at reception of a call from a communicating terminal to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method related to a telephone number of the communicating terminal in the telephone book table,

the reply method including a reply using any one of a camera image, a still image, or a

substitute image.

21. A screen display setting method according to claim 20, further comprising:
an answering reply setting step of relating, according to an input from an input means of one videophone terminal selected from the videophone terminals, in a telephone book table a telephone number of a communicating terminal to a reply method to send a reply as an answering telephone to the communicating terminal by the videophone terminal selected from the videophone terminals; and

an answering reply step of conducting by the videophone terminal control, at reception of a call from a communicating terminal in a state in which the videophone terminal is beforehand set to reply as an answering telephone, to convert an image and voice and sound to be sent from the videophone terminal to the communicating terminal into data according to a reply method as an answering telephone related to a telephone number of the communicating terminal in the telephone book table.

22. A screen display setting method according to claim 20 or 21, wherein the reply method includes a reply using the substitute image expressing a feature of a movement in an image shot by the imaging means by a movement of a character beforehand set.

23. A screen display setting method according to claim 22, wherein the reply using the substitute image includes a reply using voice and sound corresponding to the substitute image.

24. A screen display setting method according to claim 22, wherein the communicating means includes a function to establish connection to a network, the method further comprising a character obtaining step of obtaining data for the character via the network from the communicating means and storing the data in storage means,

the character obtaining step being disposed before the reply setting step and the answering reply setting step.

EVIDENCE APPENDIX

1. Sato et al., U.S. Patent No. 6,515,695, was entered in the record by the Examiner attaching to the Office Action mailed on September 13, 2005 a copy of Applicant's Art Citation, which was initialed, signed, and dated by the Examiner, listing Sato et al.

2. Nishimura, JP 07-115633, Saiki et al., JP 11-234641, and Nakajima, JP2003032727A were entered in the record by the Examiner attaching to the Office Action mailed on September 13, 2005 a Notice of References Cited listing Nishimura, Saiki et al., and Nakajima. English translations of Nishimura and Saiki et al. were supplied by the Examiner, instead of the Japanese language references. The Japanese language patent for Nakajima and an English language abstract for Nakajima were supplied by the Examiner.

(12) **United States Patent**
Sato et al.

(10) Patent No.: **US 6,515,695 B1**
 (45) Date of Patent: **Feb. 4, 2003**

(54) **TERMINAL AND SYSTEM FOR
 MULTIMEDIA COMMUNICATIONS**

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(73) Assignee: **Kabushiki Kaisha Toshiba**, Kawasaki (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(30) **Foreign Application Priority Data**

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(51) Int. Cl.⁷ **H04N 7/14**

(52) U.S. Cl. **348/14.08; 348/14.01; 348/14.03**

(58) Field of Search 348/14.01, 14.03, 348/14.08, 14.11, 14.14; 379/90.01, 93.09, 93.14, 88.13, 93.23, 142, 100.15; 370/475; **H04N 7/14, 7/15**

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Primary Examiner—Melur Ramakrishnaiah

(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

(57) **ABSTRACT**

There is disclosed a multimedia communications terminal capable of quickly connecting with the other party with less burden on the exchange station. The terminal has a phone book memory for storing a phone book database and image data. One record consists of a phone book memory number, a phone number, a name, an encrypting flag, a terminal kind number, a send/receive YES/NO flag, a sender information notice flag, and an address at which image data is stored. The terminal further includes a main controller including a CPU, a ROM, and a RAM. The main controller controls all the portions of the terminal to realize the operation of a portable videophone. When an outgoing call is made, the phone book memory is referenced. The outgoing call is made in connection procedures adapted for the kind of the other party.

7 Claims, 14 Drawing Sheets

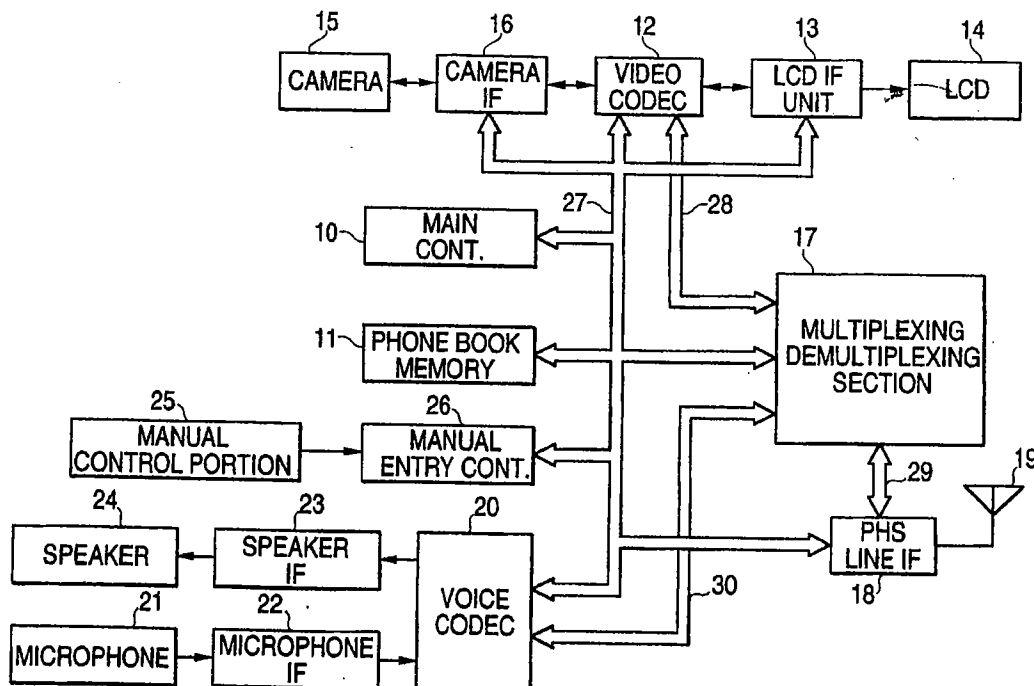


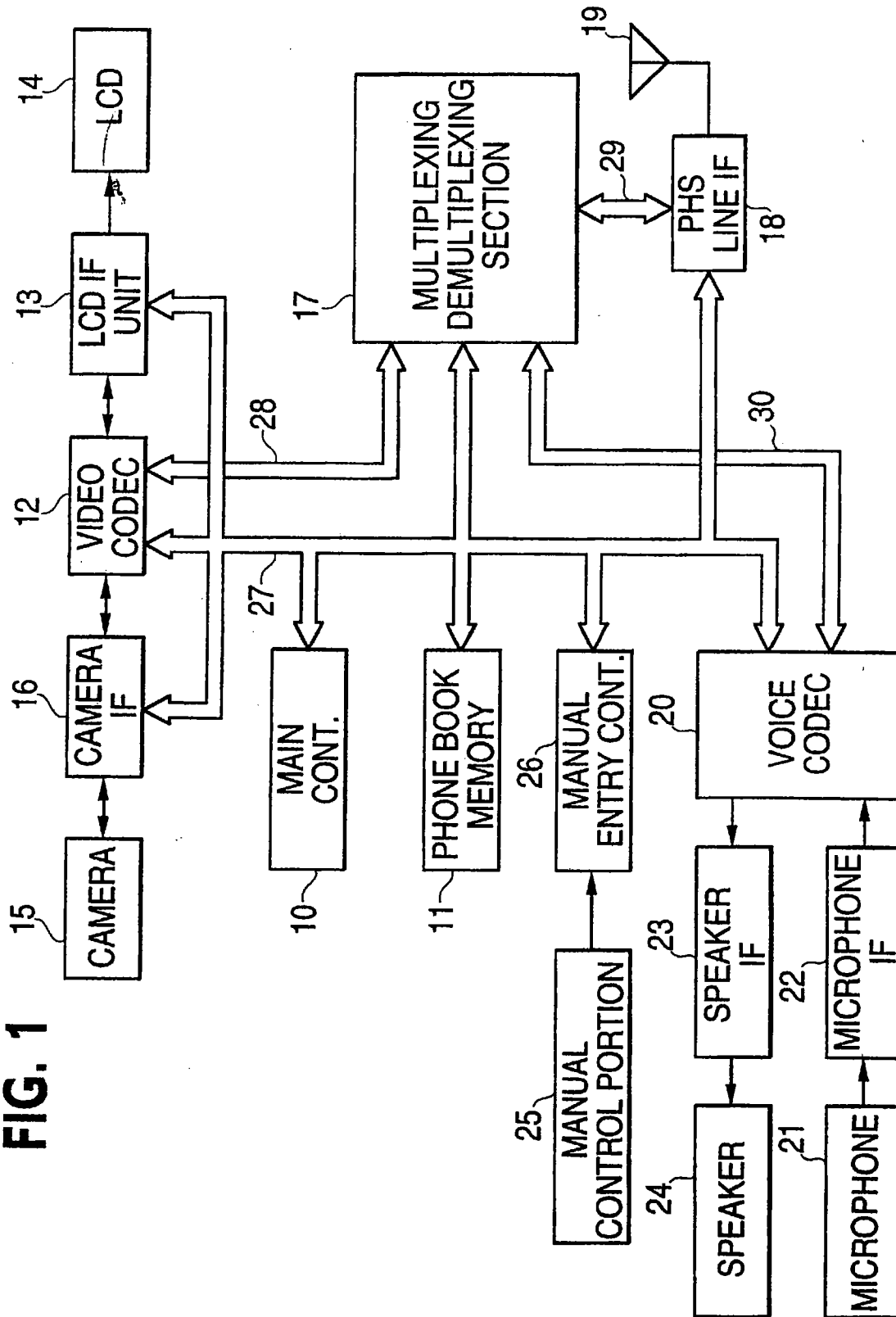
FIG. 1

FIG. 2

| PHONE BOOK MEMORY NO. | PHONE NO. | NAME | ENCIPHERING FLAG | TERMINAL KIND NO. | SEND/RECEIVE YES/NO FLAG | SENDER INFO. NOTICE FLAG | ADDRESS AT WHICH IMAGE DATA STORED |
|--------------------------|--------------|------|---------------------|----------------------|-----------------------------|-----------------------------|---------------------------------------|
| 1 | 03-3454-XXXX | OOΔΔ | 1 | 3 | 01 | 0 | XXXX |
| 2 | 010-23-XXXXX | OOXX | 0 | 11 | 11 | 1 | --- |
| 3 | 044-345-XXXX | OXΔO | 1 | 2 | 10 | 1 | --- |
| 4 | 050-43-XXXXX | OΔX□ | 0 | 13 | 00 | 0 | --- |
| 5 | 011-766-XXXX | O□XO | 0 | 1 | 01 | 1 | --- |
| 6 | | | | | | | |

FIG. 3

| FLAG VALUE | DEFINITION |
|---------------|---|
| 1 | DISPLAY OF THE CORRESPONDING RECORD IS PERMITTED AT ANY TIME |
| 0 | DISPLAY OF THE CORRESPONDING RECORD IS PERMITTED ONLY IF THE ENCRYPTING FUNCTION IS CANCELED |

FIG. 4

| TERMINAL KIND NO. | THE KIND OF THE TERMINAL | THE KIND OF THE PROTOCOL |
|-------------------|---|--------------------------|
| 1 | ANALOG PHONE (AUDIO) | p1 |
| 2 | ANALOG PHONE (MULTIMEDIA) | p2 |
| 3 | ANALOG PHONE (AUDIO/MULTIMEDIA) | p3 |
| 4 | ISDN PHONE (AUDIO) | p1 |
| 5 | ISDN PHONE (MULTIMEDIA) | p2 |
| 6 | ISDN PHONE (AUDIO/MULTIMEDIA) | p3 |
| 7 | CELLULAR PHONE (AUDIO) | p1 |
| 8 | CELLULAR PHONE (MULTIMEDIA) | p2 |
| 9 | CELLULAR PHONE (AUDIO/MULTIMEDIA) | p3 |
| 10 | DIGITAL CELLULAR PHONE (AUDIO) | p1 |
| 11 | DIGITAL CELLULAR PHONE (MULTIMEDIA) | p2 |
| 12 | DIGITAL CELLULAR PHONE (AUDIO/MULTIMEDIA) | p3 |
| 13 | PHS PHONE (AUDIO) | p1 |
| 14 | PHS PHONE (MULTIMEDIA) | p2 |
| 15 | PHS PHONE (AUDIO/MULTIMEDIA) | p3 |
| 16 | UNKNOWN | p3 |

FIG. 5

| SEND/RECEIVE VIDEO DATA YES/NO FLAG (YES:1, NO:0) | | |
|---|--------------------|--|
| ("T") TRANSMISSION | ("R") RECEPTION | DEFINITION |
| 0 | 0 | NEITHER "T" NOR "R" IS PERMITTED |
| 0 | 1 | "R" IS PERMITTED, "T" IS NOT PERMITTED |
| 1 | 0 | "T" IS PERMITTED, "R" IS NOT PERMITTED |
| 1 | 1 | BOTH "T" AND "R" ARE PERMITTED |

FIG. 6

| FLAG VALUE | DEFINITION |
|---------------|---|
| 1 | INFORMATION OF THE SENDER IS SENT TO THE OTHER PARTY |
| 0 | INFORMATION OF THE SENDER IS NOT SENT TO THE OTHER PARTY |

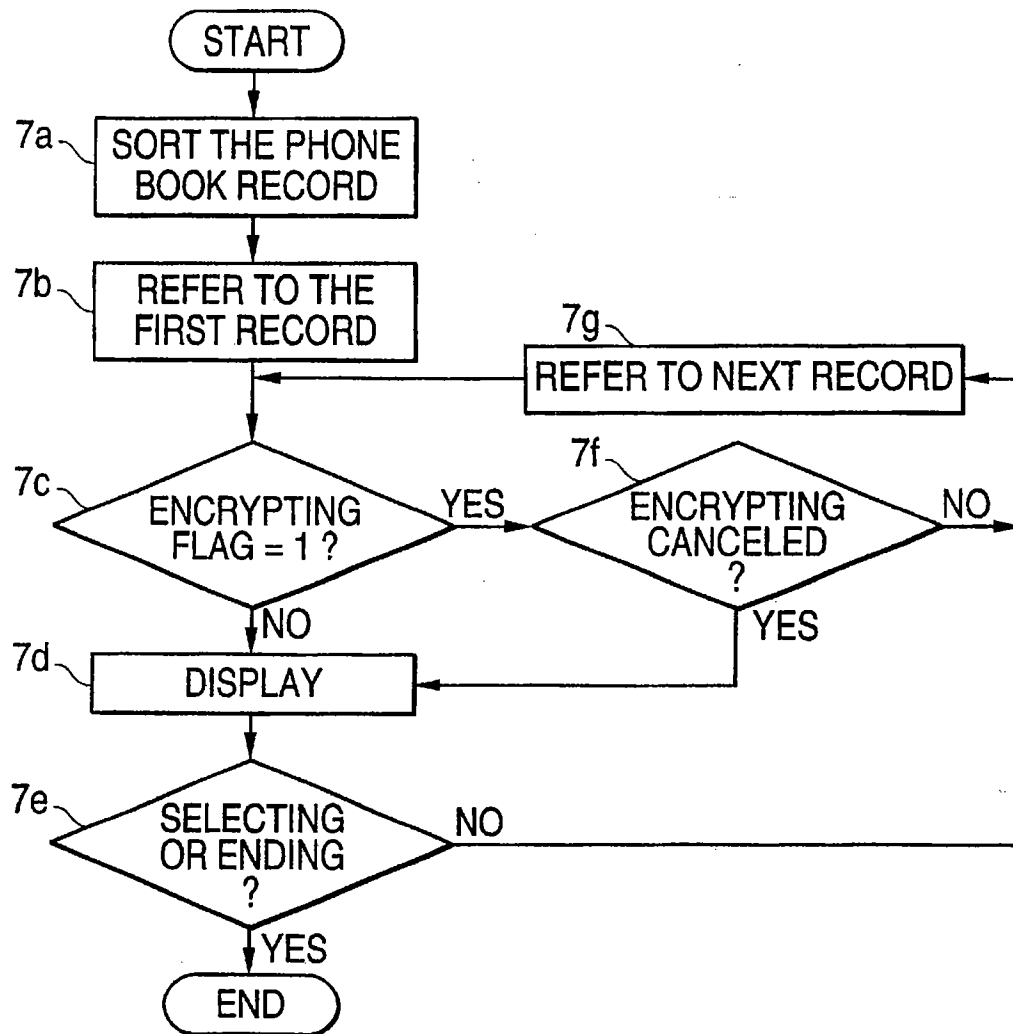
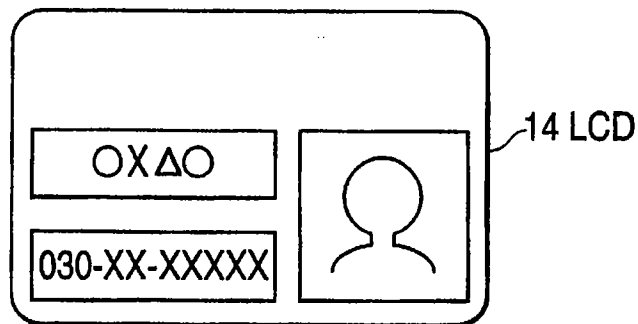
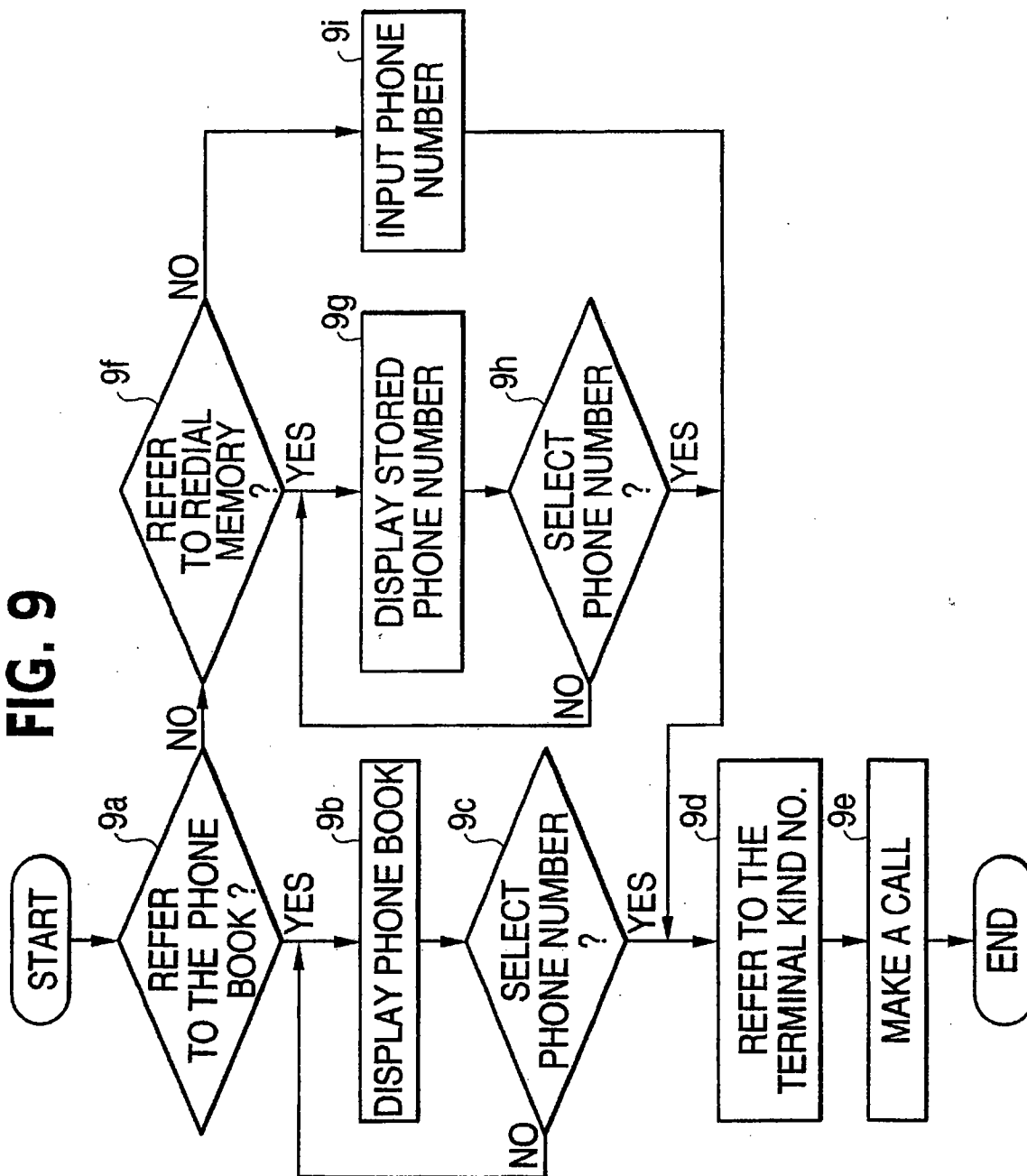
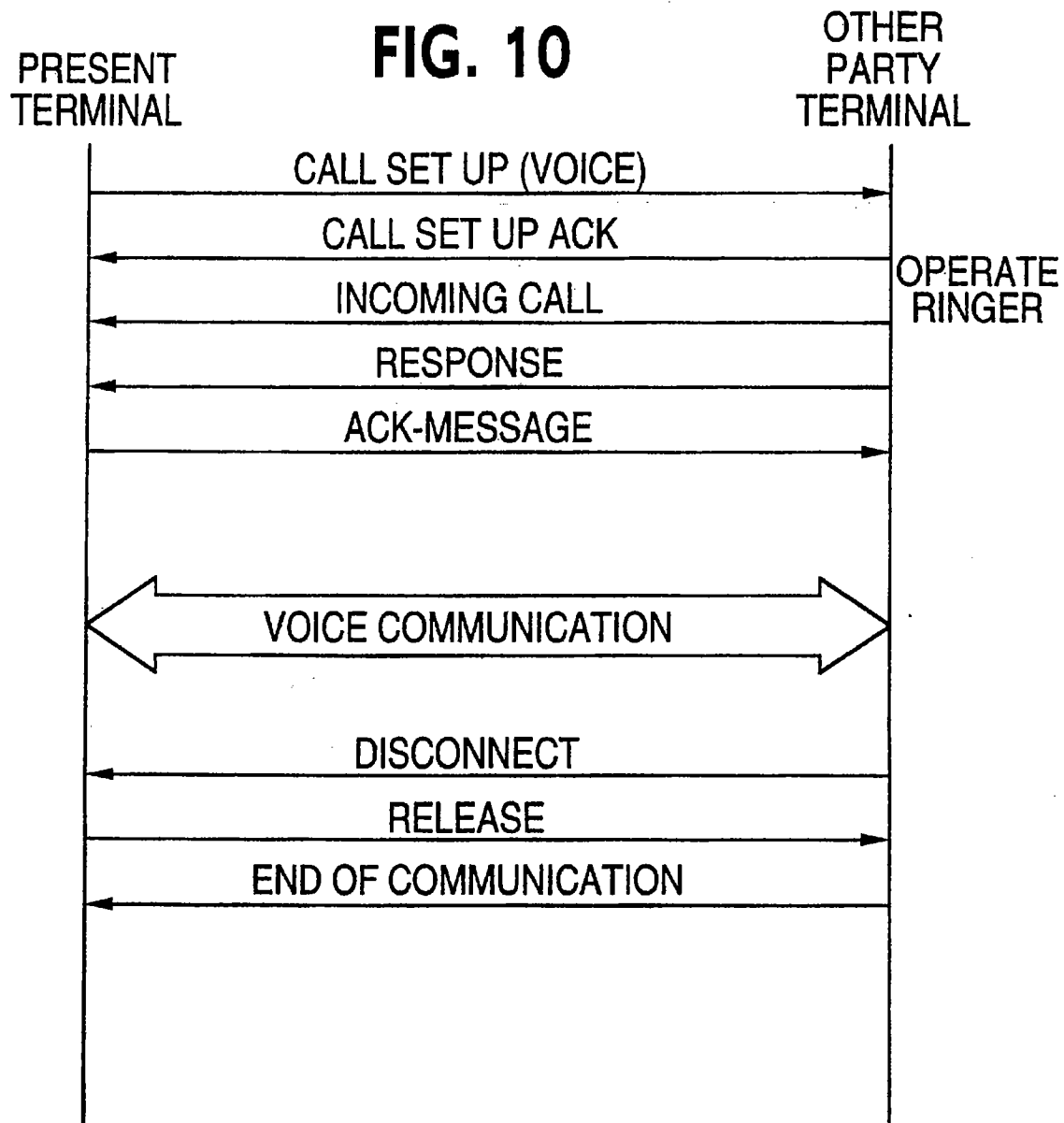
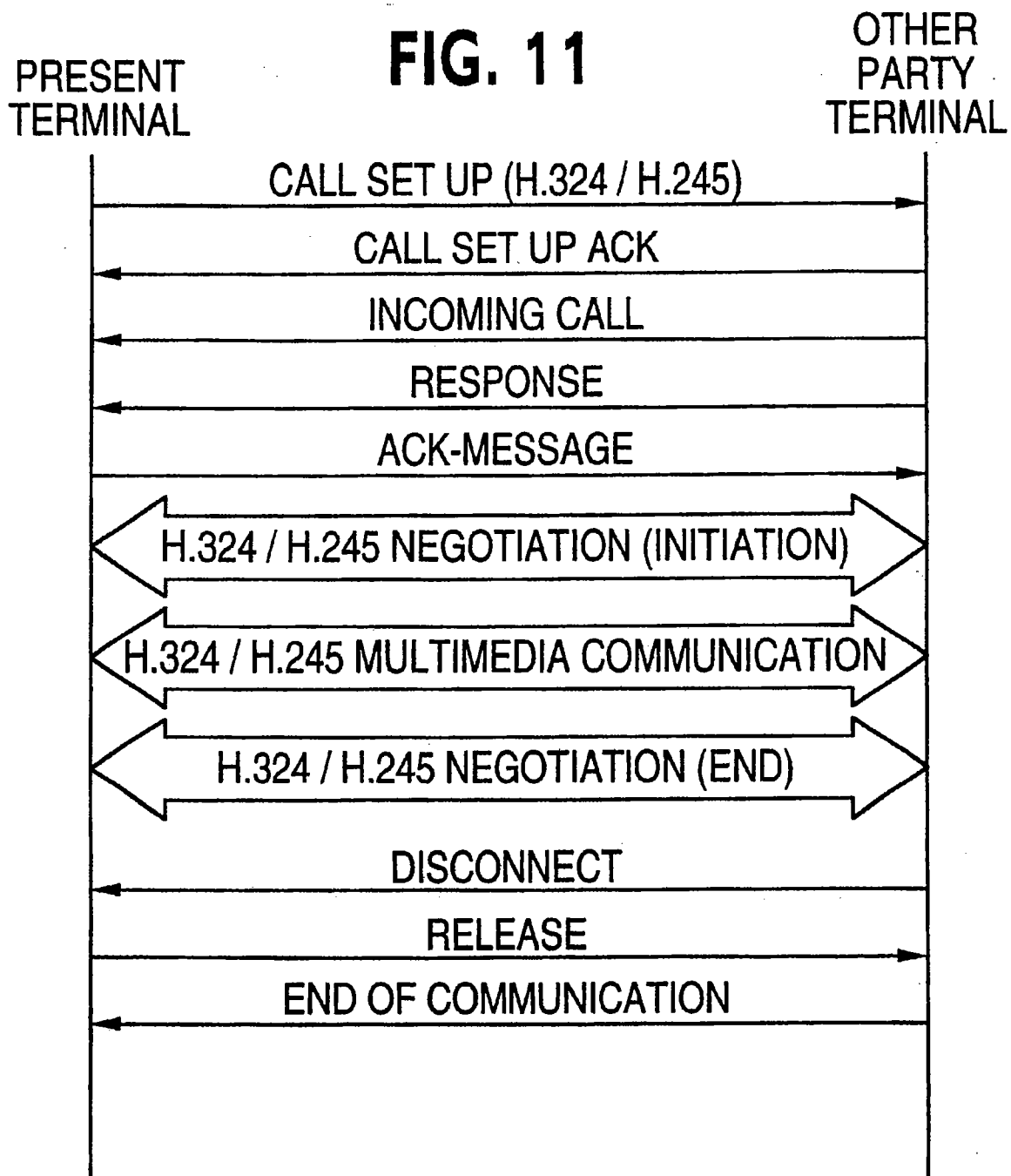
FIG. 7**FIG. 8**

FIG. 9





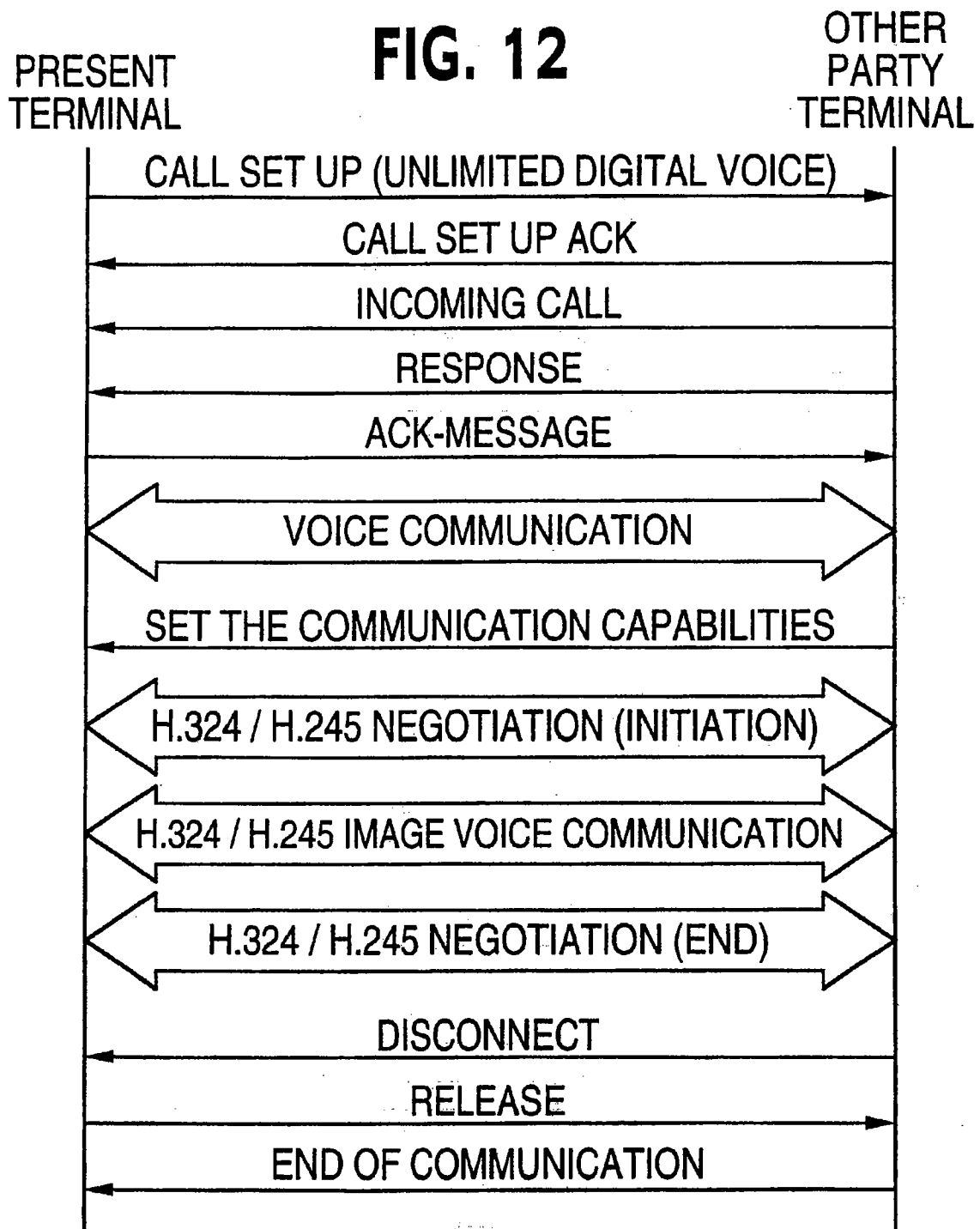


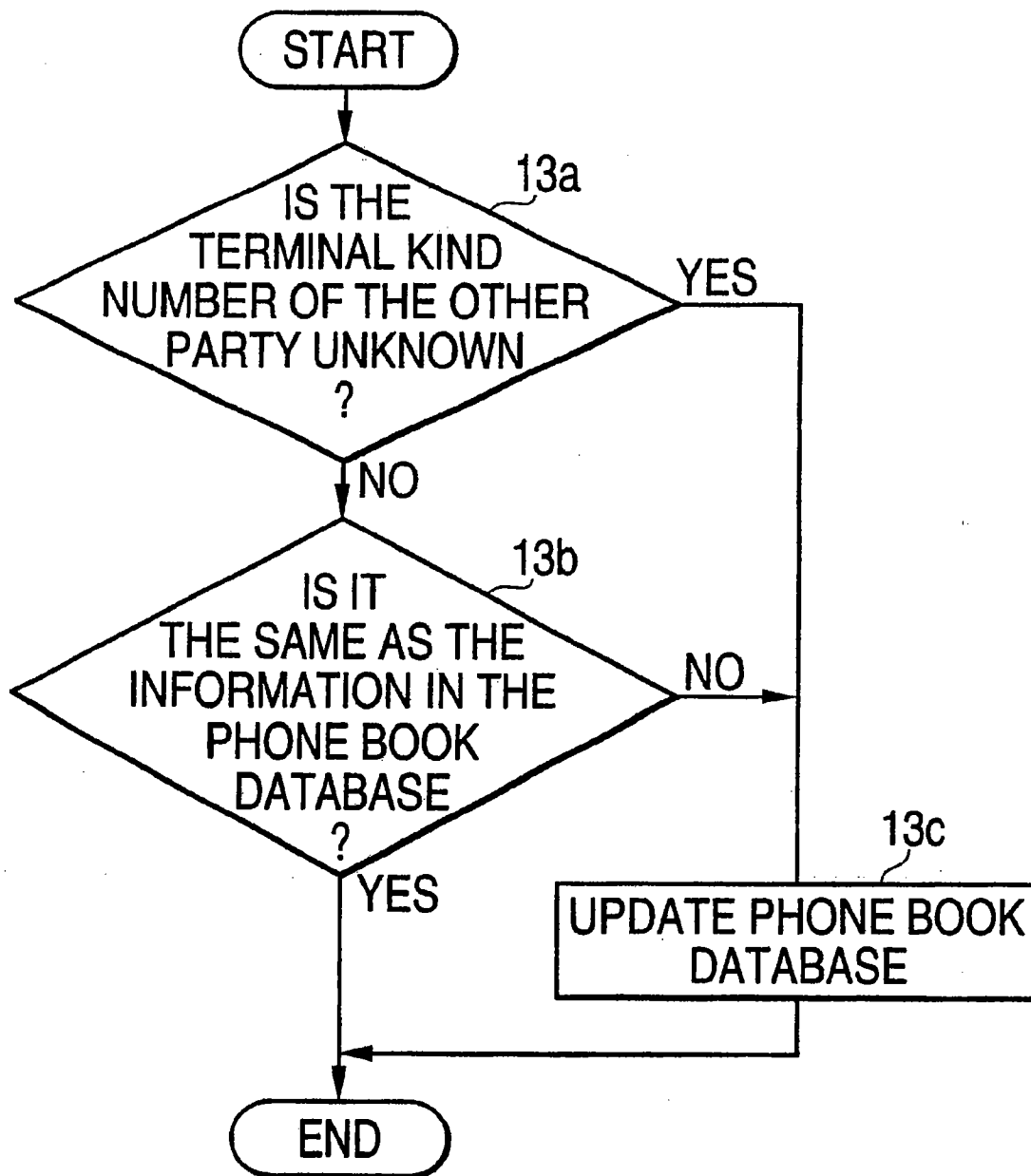
FIG. 13

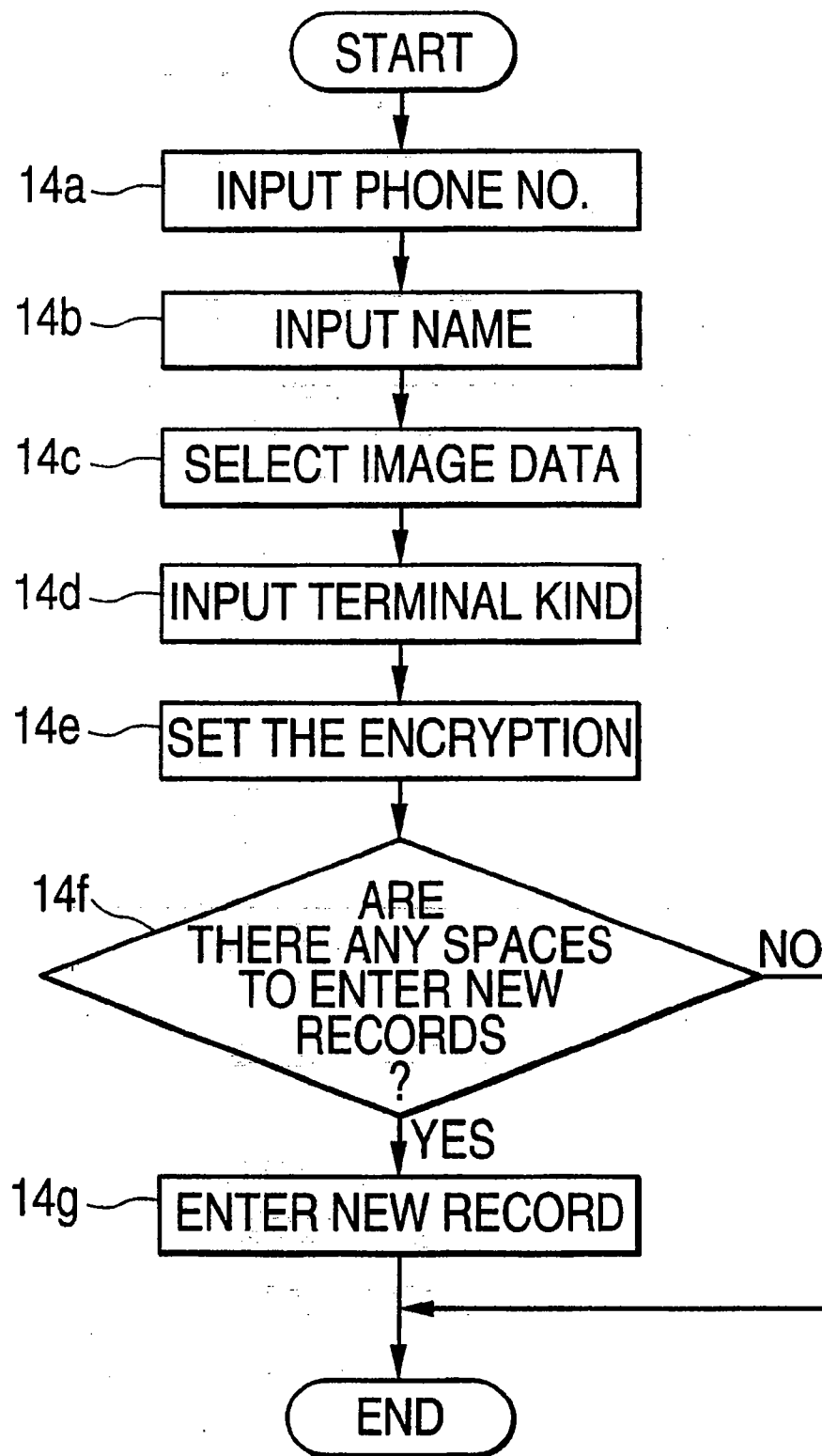
FIG. 14

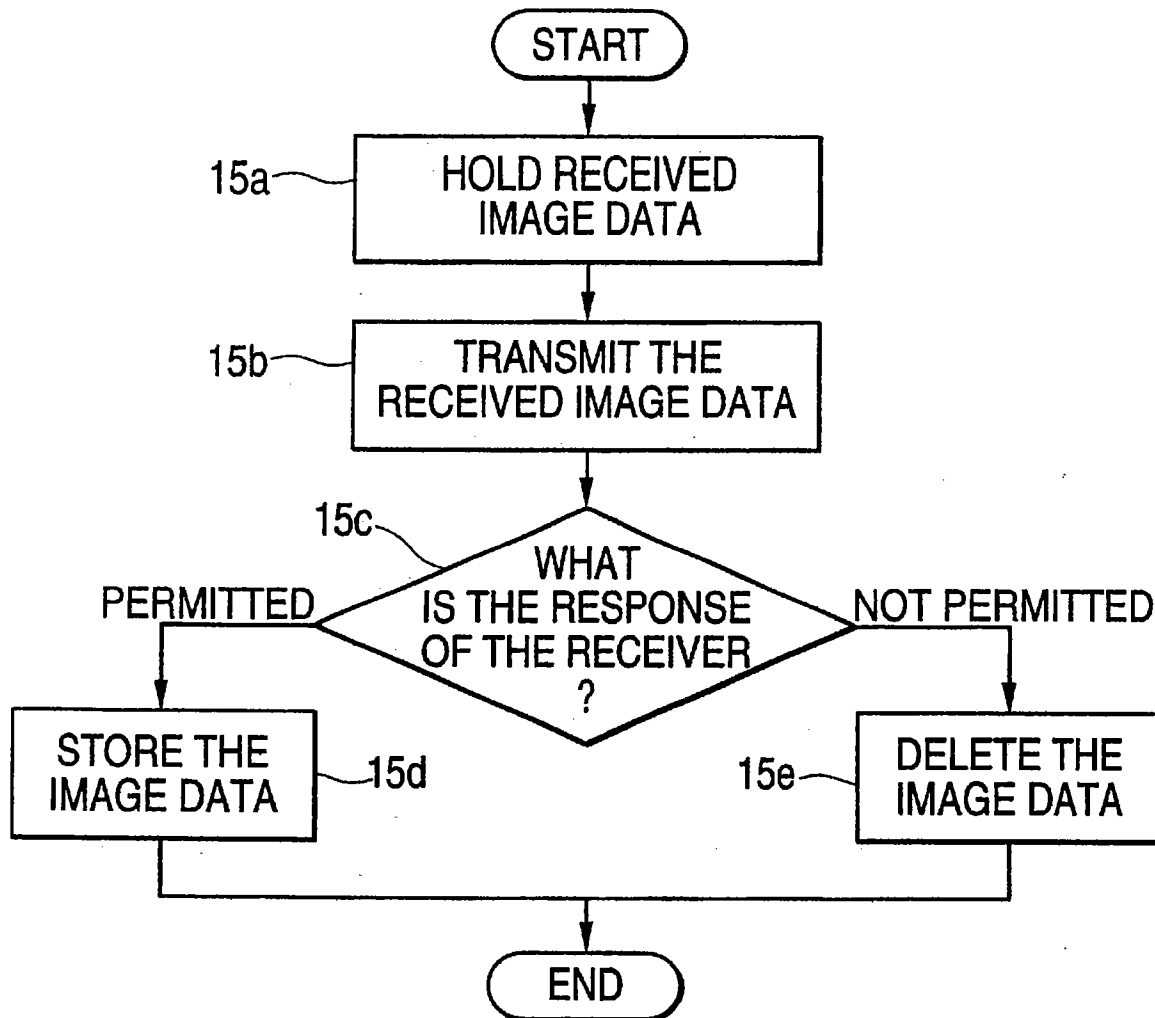
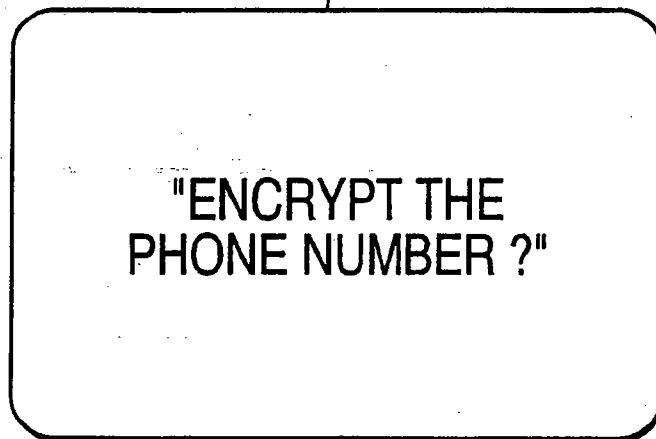
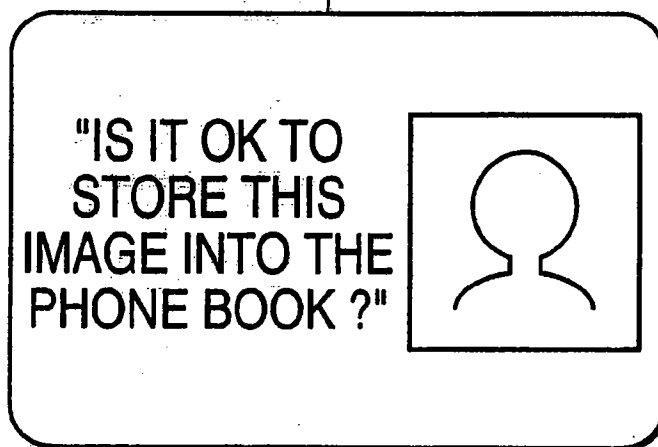
FIG. 15

FIG. 16

14 LCD

**FIG. 17**

14 LCD



TERMINAL AND SYSTEM FOR MULTIMEDIA COMMUNICATIONS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a multimedia communications terminal having videophone capabilities that permit voice communications while sending and receiving pictures taken from talkers. The invention also relates to a multimedia communications system having such terminals.

2. Description of the Related Art

At present, multimedia communications terminals having videophone capabilities have been put into practical use in applications using ISDN (Integrated Services Digital Network), digital cellular phones, PHS (Personal Handy-phone System) or the like. Some of these multimedia communications terminals have a phone book function capable of storing information such as names, phone numbers, images (e.g., an image of the face of the other party while talking), as described in Japanese Unexamined Patent (Kokai) Nos. 30871/1995, and 46435/1997.

Such a multimedia communications terminal having videophone capabilities as described above can store information about individual persons such as the name and images of the other party in its phone book database. However, the communications terminal does not have a function of storing the kinds of data that can be handled as communications data (e.g., audio data and video data).

Therefore, with the prior art multimedia terminal, an outgoing call is once made according to protocols that permit voice communications to establish a communications link with a single call, whether the terminal of the other party supports only voice communications or permits multimedia communications. Then, a check is made if the terminal of the other party supports multimedia communications. If the check is done, multimedia communications are carried out.

In this way, to discern the kinds of data capable of being handled by the terminal of the other party, the prior art multimedia communications terminal needs complex procedures for call control. Also, extra bearer transmission to the communications terminal takes place until multimedia communications are initiated. This increases the burden on the switching station. Furthermore, it takes a long time to complete the interconnection.

In this multimedia communications terminal, image received from the other party and the name of the person within the image are stored in a correlated manner to each other in a phone book database.

Where image data taken from the other party is stored in the phone book database, even images what the other party does not want to be stored are stored. This may infringe the privacy and the right to his or her portraits.

The prior art multimedia communications terminal necessitates complex procedures for call control to discern the kinds of data capable of being handled by the other terminal. Extra bearer transmission to the communications terminal takes place. This increases the burden on the switching station. Furthermore, it takes a long time to complete the interconnection.

Moreover, in the prior art multimedia communications terminal, even images what the other party does not want to be stored are stored in a phone book database. This may infringe the privacy and the right to portraits of the other party.

SUMMARY OF THE INVENTION

In an attempt to solve the foregoing problems, the present invention has been made. It is an object of the present invention to provide a multimedia communications terminal which can be quickly connected with a desired party with less burden on the switching station.

It is another object of the invention to provide a multimedia communications terminal and multimedia communications system capable of storing image accepted from the other party as phone book data items without infringing the privacy or the right to portraits of the other party.

It is a further object of the invention to provide a multimedia communications terminal and multimedia communications system which, if the other party with which the present terminal is communicating refuses storing video data accepted from the other party, checks that the terminal of the other party supports multimedia communications by referring to a phone book database.

It is a yet other object of the invention to provide a multimedia communications terminal capable of switching the mode of operation between transmission/reception mode and reception-only mode according to the kind of information. For example, audio data are both transmitted and received but video data are only received.

It is a still other object of the invention to provide a multimedia communications terminal capable of informing the other party of the name of the caller according to the other party when an outgoing call is made.

The objects described above are achieved in accordance with the teachings of the invention by a multimedia communications terminal capable of at least sending or receiving video information, the terminal being equipped with a means for storing information for discerning other party and information indicating the communications capabilities of the terminal of the other party such that these two kinds of information are correlated with each other.

The multimedia communications terminal described above is characterized in that it has the other party information storage means to store the information for discerning the other party and the information indicating the communications capabilities of the other party in a correlated manner to each other.

Accordingly, with this multimedia communications terminal, the user can grasp the communications capabilities of the other party by referring to the information stored in the other party information storage means. Therefore, the user can make a call connection in procedures adapted for the other party. This alleviates the burden on the switching station. Hence, a connection with the other party can be quickly made.

The present invention also provides a multimedia communications terminal comprising a communications capability information storage detection means for sensing whether information about the communications capability of the other party is stored in said other party information storage means and a communication capability information writing means for storing communications capability information gained from the other party and information for discerning the other party in said other party information storage means such that these two kinds of information are correlated with each other, if the communications capability information storage detection means senses that said communications capabilities are not stored.

The multimedia communications terminal of the construction described above is equipped with the other party

information storage means for storing information for discerning the other party and information indicating the communications capabilities of the terminal of the other party such that these two kinds of information are correlated with each other. If the communication capability information of the other party are not stored in the other party information storage means, communication capability information gained from the other party is stored in the other party information storage means.

Accordingly, with the multimedia communications terminal of the construction described above, the user can make a call connection in procedures adapted for the communications capabilities of the other party by referring to the information stored in the other party information storage means. Consequently, the burden on the switching station is reduced. A connection with the other party can be quickly made. If information about the communications capabilities of the other party is not stored, the information can be gained from the other party and stored in the other party information storage means.

The present invention also provides a multimedia communications terminal comprising a communications capability information storage detection means for determining whether information indicating the communications capabilities and newly gained from the other party agrees with the information stored in the other party information storage means and a communications capability information writing means for updating the information stored in the other party information storage means to the information newly gained from the other party regarding the communications capabilities.

The multimedia communications terminal of the construction described above is equipped with the other party information storage means for storing information for discerning the other party and information indicating the communications capabilities of the terminal of the other party such that these two kinds of information are correlated with each other. If information about the communications capabilities newly obtained from the other party does not agree with information stored in the other party information storage means, the information stored in the other party information storage means is updated to the information about the communications capabilities newly obtained from the other party.

Accordingly, the multimedia communications terminal of the construction described above permits the user to make a call connection in procedures adapted for the communications capabilities of the other party by referring to the information stored in the other party information storage means. This reduces the burden on the switching station. It is possible to connect with the other party quickly. If the information about the communications capabilities of the other party has changed, the information can be updated to the new information and stored in the other party information storage means.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications terminal comprising a communications means for making a call connection in given procedures adapted for the communications capabilities stored in the other party information storage means.

The multimedia communications terminal of the construction described above has the other party information storage means for storing the information for discerning the other party and the information indicating the communications capabilities of the terminal of the other party such that

these two kinds of information are correlated with each other. An outgoing call is made in procedures adapted for the information stored in the other party information storage means.

Accordingly, the multimedia communications terminal enables the user to make a call connection in procedures adapted for the communications capabilities of the other party even if the user does not grasp the communications capabilities of the other party. Thus, the burden on the switching station is reduced. A connection with the other party can be quickly made.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications terminal capable of sending and receiving at least one of video information, audio information, and data information, said terminal comprising: other party information storage means for storing information indicating whether information capable of being sent and received by said multimedia communications terminal is sent or received to and from the other party in connection with information for identifying the other party; and a communications means for sending and receiving information to and from the other party according to information stored in said other party information storage means.

The multimedia communications terminal of the construction described above controls transmission and reception of information to and from this multimedia communications terminal according to information stored in the other party information storage means.

Accordingly, the multimedia communications terminal of the construction described above can determine whether transmission and reception of audio data, video data, or data information should be done according to information. For example, with respect to audio data, they are sent and received. With respect to video data, they are only received.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications terminal capable of communicating in terms of audio and video data, the terminal comprising: other party information storage means for storing information indicating whether a notice of the sender is given to the other party in a correlated relation to information for discerning the other party; and a communications means for giving a notice of the sender according to the information stored in said other party information storage means when an outgoing call is made.

In the multimedia communications terminal of the construction described above, information indicating whether a notice of the sender is given to the other party is stored in the other party information storage means. When an outgoing call is made, a notice of the sender is given according to the information stored in the other party information storage means.

Consequently, with the multimedia communications terminal of this construction, a notice of the sender is given according to the other party when an outgoing call is made.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications terminal capable of communicating in terms of audio and video data, the terminal comprising: other party information storage means for storing information for discerning the other party and video information such that these two kinds of information are correlated to each other; an image storage YES/NO inquiry means for sending an inquiry to the other party to ask whether video data received from the other party supporting multimedia

communications are permitted to be stored as said video information; and an image information writing means for storing said image information in said other party information storage means if response to the inquiry to the other party by the image storage YES/NO inquiry means is affirmative.

The multimedia communications terminal of the construction described above asks the other party whether the video data received from the other party are allowed to be stored. If response is affirmative, the video data received from the other party are stored.

Accordingly, with the multimedia communications terminal of the construction described above, image accepted from the other party can be stored in a phone book database without infringing the privacy or the right to portraits of the other party.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications terminal capable of communicating in terms of audio and video data, the terminal comprising: an image information writing means for storing given information for indicating that the terminal of said other party supports multimedia communications in case that response to the inquiry by the image storage YES/NO inquiring means in said other party information storage means.

In the multimedia communications terminal of the construction described above, if storing the video data received from the other party is rejected by the other party, given image information indicating that the terminal of other party supports multimedia communications is stored instead of the video data described above.

Accordingly, with the multimedia communications terminal of the construction described above, if the other party rejects storing the video data received from the other party, it can be seen that the terminal of the other party supports multimedia communications by referring to the other party information storage means.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications system comprising first and second multimedia communications terminals capable of communicating with each other in terms of audio and video data. The first multimedia communications terminal is equipped with a responsive means for responding to an inquiry as to whether video data from the second multimedia communications terminal are allowed to be stored or not. The second multimedia communications terminal comprises: other party information storage means for storing information for discerning the other party and video information such that these two kinds, of information are correlated to each other; an image storage YES/NO inquiry means for sending an inquiry to the other party to ask whether the video data received from the terminal of the other party supporting multimedia communications are allowed to be stored as said video information; and a video information writing means for storing said video information in said other party information storage means if response to the inquiry made by the image storage YES/NO inquiry means is that storing is permitted.

With the multimedia communications system of the construction described above, an inquiry is sent to the other party to ask whether video data received from the other party are allowed to be stored. If the response is affirmative, the video data received from the other party are stored.

Accordingly, with the multimedia communications system of the construction described above, image taken from

the other party can be stored in a phone book database without infringing the privacy or the right to portraits of the other party.

The objects described above are also achieved in accordance with the teachings of the invention by a multimedia communications system capable of providing communications in terms of audio and video information, the multimedia communications terminal comprising: image information writing means for storing given image information indicating that said other party supports multimedia communications if response to an inquiry from said image storage YES/NO inquiry means is that storing is not permitted.

In the multimedia communications system of the construction described above, if storing the video data received from the multimedia communication terminal of the other party is rejected by the other party in communications between multimedia communication terminals, given image information indicating that the terminal of the other party supports multimedia communications is stored instead of the video data described above by one terminal.

Therefore, with the multimedia communications system of the construction described above, even if storing the video data received from the other party is rejected, the multimedia communications terminal can see that the terminal of the other supports multimedia communications by referring to the other party information storage means.

Other objects and features of the invention will appear in the course of the description thereof, which follows.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram of a multimedia communications terminal in accordance with the present invention;

FIG. 2 is a diagram illustrating data stored in a phone book memory of the multimedia communications terminal shown in FIG. 1;

FIG. 3 is a table illustrating an encrypting flag stored in the phone book memory of the multimedia communications terminal shown in FIG. 1;

FIG. 4 is a table illustrating the relations of terminal kind numbers stored in the phone book memory of the multimedia communications terminal shown in FIG. 1 to protocols p1-p3;

FIG. 5 is a table illustrating a send/receive YES/NO flag stored in the phone book memory of the multimedia communications terminal shown in FIG. 1;

FIG. 6 is a table illustrating a sender information notice flag stored in the phone book memory of the multimedia communications terminal shown in FIG. 1;

FIG. 7 is a flowchart illustrating processing for displaying data stored in the phone book memory of the multimedia communications terminal shown in FIG. 1;

FIG. 8 is a view depicting an example of display provided on an LCD of the multimedia communications terminal shown in FIG. 1;

FIG. 9 is a flowchart illustrating an outgoing call made by the multimedia communications terminal shown in FIG. 1;

FIG. 10 is a diagram illustrating a sequence of operations performed by the multimedia communications terminal shown in FIG. 1 when the terminal provides voice communications;

FIG. 11 is a diagram illustrating a sequence of operations performed by the multimedia communications terminal shown in FIG. 1 when the terminal provides multimedia communications;

FIG. 12 is a diagram illustrating a sequence of operations performed by the multimedia communications terminal shown in FIG. 1 when the mode of operation is switched from voice communications to multimedia communications;

FIG. 13 is a flowchart illustrating updating of phone book database conducted during communications of the multimedia communications terminal shown in FIG. 1;

FIG. 14 is a flowchart illustrating the manner in which data are entered in the phone book memory of the multimedia communications terminal shown in FIG. 1;

FIG. 15 is a flowchart illustrating processing for storing image data about the other party when the image data are not stored in the multimedia communications terminal shown in FIG. 1;

FIG. 16 is a view illustrating an example of display provided on an LCD when the multimedia communications terminal shown in FIG. 1 enters data in the phone book database of the phone book memory; and

FIG. 17 is a view illustrating an example of display provided on the LCD of the other party when the multimedia communications terminal shown in FIG. 1 enters data in the phone book database of the phone book memory.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, there is shown a multimedia communications terminal in accordance with one embodiment of the invention.

This terminal comprises a main controller 10, a phone book memory 11, a video coded 12, an LCD interface (LCD IF unit) 13, a liquid crystal display (LCD) unit 14, a camera portion 15, a camera interface (camera IF) 16, a multiplexing and separating section 17, a PHS line interface (PHS line IF) 18, an antenna 19, a voice coded 20, a microphone 21, a microphone interface (micro IF) 22, a speaker interface (speaker IF) 23, a speaker 24, a manual control portion 25, and a manual entry control circuit portion 26.

Of these components, the main controller 10, the phone book memory 11, the video coded 12, the LCD interface 13, the camera interface 16, the multiplexing and separating section 17, the PHS line interface 18, the voice coded 20, and the manual entry control circuit portion 26 are connected together via a main bus 27.

The multiplexing and separating section 17 is connected with the video coded 12, the PHS line interface 18, and the voice coded 20 via sync buses 28, 29, and 30.

The main controller 10 consists of a CPU, a ROM, a RAM, and so on. The operations of the various portions of the present multimedia communications terminal are under control of the main controller 10, whereby realizing the operation of a portable videophone. The main controller 10 realizes processing means for accomplishing various functions in software according to data stored in the ROM, RAM, and phone book memory 11 (described later) of the main controller 10 itself.

The main controller 10 stores in ROM thereof protocol p1 for providing voice communications, protocol p2 for providing multimedia communications, and protocol p3 permitting switching to multimedia communications after voice communications.

In the ROM described above, each protocol stored is made to correspond to terminal kind numbers stored in the phone book memory 11 described later according to the contents of communications. Terminal kind numbers "1", "4", "7", "10", and "13" described later are made to corre-

spond to the protocol p1. Terminal kind numbers "2", "5", "8", "11", and "14" are made to correspond to the protocol p2. Terminal kind numbers "3", "6", "9", "12", "15", and "16" are made to correspond to the protocol p3.

The aforementioned phone book memory 11 is used to store a phone book database and image data. This database is composed of plural records. Each record comprises a phone book memory number, a phone number, a name, an encrypting flag, a terminal kind number, send/receive YES/NO flag, a sender information notice flag, an address at which image data is stored, and the like, as shown in FIG. 2.

The encrypting flag described above is information for controlling the method of displaying a corresponding record on the LCD 14 (described later). When this flag is set to "0", display of the corresponding record is permitted at any time, as shown in FIG. 3. When the flag is set to "1", display of the corresponding record is permitted only if entry of a predetermined secret number or password cancels the encrypting function.

The above-described terminal kind number is information indicating the kind of the terminal of the other party corresponding to the record. As shown in FIG. 4, terminals are classified into analog phone, ISDN phone, analog cellular phone, digital cellular phone, PHS phone, and so on. Furthermore, terminals are classified into terminals supporting phone communications services capable of providing audio-only communications, terminals supporting multimedia communications services capable of providing communications both by audio and video data, and terminals supporting both phone communications services and multimedia communications services. The protocols p1-p3 are made to correspond to these kinds of terminals in the ROM of the main controller 10.

If the kind of the other party is not known, it is treated as "unknown" and terminal class number "16" is given to it.

The send/receive YES/NO flag is information indicating whether transmission and reception of video data is permitted or not, when communications with the other party corresponding to the record are made. This send/receive YES/NO flag assumes states as shown in FIG. 5, for example.

The aforementioned sender information notice flag is information indicating whether information of the present user (e.g., phone number, name, and terminal kind number) is sent to the other party. This flag takes states as illustrated in FIG. 6.

The video codec 12 decodes and reproduces encoded video data, and sends the reproduced video data to the LCD interface 13. Furthermore, the video codec 12 encodes video data supplied from the camera portion 15 via the camera interface 16 and creates MPEG-4 encoded video data.

The LCD interface 13 converts the video data supplied from the video codec 12 into a signal form that can be processed by the LCD 14, and sends the converted data to the LCD 14. This LCD 14 is a color or monochrome liquid crystal display having sufficient video displaying capabilities (such as resolution) to display motion picture with MPEG-4, and displays a picture according to video data supplied from the LCD interface 13.

For example, a CCD camera is used as the camera portion 15, which picks up an image of an object, creates video data, and sends it to the camera interface 16. The camera interface 16 receives the video data from the camera portion 15, converts the data into a form that can be processed by the video codec 12, and supplies the data to the codec 12. If a

photography inhibit cancel command is supplied from the main controller 10, the camera interface 16 routes the command to the camera portion 15.

The multiplexing and separating portion 17 multiplexes encoded video data supplied from the video codec 12 via the sync bus 28, the encoded audio data supplied from the voice codec 20 via the sync bus 30, and other data supplied from the main controller 10 via the main bus by a given method, for example, according to ITU-T Rec. H.221 or the like. The multiplexing and demultiplexing portion 17 supplies the multiplexed data as transmitted data to the PHS line interface 18 via the sync bus 29.

The multiplexing and demultiplexing portion 17 demultiplexes encoded video data, encoded audio data, and other data from the transmitted data supplied from the PHS line interface 18 via the sync bus 29. The multiplexing and demultiplexing portion 17 supplies the demultiplexed data to the video codec 12, the voice codec 20, and the main controller 10, respectively, via the sync buses 28, 30, and the main bus 27.

The PHS line interface 18 is a section used to make a wireless connection to a PHS network via the antenna 19. The interface 18 makes various calls for communications via the PHS network and sends and receives data via communications paths established in the PHS network.

The voice codec 20 digitizes analog audio signal applied via the microphone 21 and the microphone interface. The codec 20 encodes the signal by a given audio encoding method such as ADPCM to create encoded audio data, and sends the encoded audio data to the multiplexing and demultiplexing portion 17 via the sync bus 30.

The voice codec 20 decodes the encoded audio data supplied from the multiplexing and demultiplexing portion 17 into analog audio signal, which is supplied to the speaker interface 23.

The microphone 21 converts sound from the surroundings into an audio signal and supplies it to the microphone interface 22, which in turn converts the audio signal supplied from the microphone 21 into a signal form that can be processed by the voice codec 20 and supplies it to the voice codec 20.

The speaker interface 23 converts the audio signal supplied from the voice codec 20 into a signal form capable of being processed by the speaker 24, and supplies the converted signal to the speaker 24. This speaker 24 converts the audio signal supplied from the speaker interface 23 into an audible signal at an increased level.

The manual control portion 25 receives various instructions of the user to be applied to the main controller 10. The manual control portion 25 has control buttons for specifying various functions, push buttons for entering phone numbers and various numerical values, and a power switch for turning on and off the operation of the present terminal. The manual entry control circuit portion 26 recognizes the contents of an instruction entered from the manual control portion 25 and informs the main controller 10 of the contents of the instruction.

The present terminal is further equipped with a power supply section (not shown) for supplying electric power to the various portions described above.

The operation of the multimedia communications terminal of the construction described above is next described. The various portions of the multimedia communications terminal are all under control of the main controller 10 and operate as follows.

The display process of data stored in the phone book memory 11 is described. The process is illustrated in the flowchart of FIG. 7.

In step 7a, records stored as a database in the phone book memory 11 are sorted in an ascending or descending order of name, in order of entering record, in order of number of outgoing calls, or in order of number of incoming calls. Then, control goes to step 7b.

In step 7b, the first one of records stored in the phone book database sorted in step 7a is referenced, and then control proceeds to step 7c.

In step 7c, a decision is made as to whether the encrypting flag of the referenced record is 1 or not. If the flag is 0, control goes to step 7d. If the encrypting flag is 1, control goes to step 7f.

In step 7d, the referenced record is displayed on the LCD 14. FIG. 8 shows an example of this display. The corresponding phone number and image data are displayed, along with the name. Control then proceeds to step 7e.

In step 7e, a decision is made as to whether an instruction for selecting the phone number displayed in step 7d as the phone number of the connected party or an instruction for ending this displaying processing is given. If either instruction is given, this processing is ended. If other instruction is given, control goes to step 7g.

In step 7f, a decision is made as to whether the encrypting function described above has been canceled. If this function has been canceled, control goes to step 7d, where information about the referenced record is displayed. If the encrypting function has not been canceled, control proceeds to step 7g.

The cancellation of the encrypting function is performed prior to the displaying processing by entering a preset secret password.

In step 7g, the record that is next in order to the record referenced in step 7b is referenced, and control goes to step 7c.

Processing for selecting a party to be connected and processing for making an outgoing call to this party are next described by referring to the flowchart of FIG. 9.

In step 9a, a decision is made as to whether a request for referencing the phone book database stored in the phone book memory 11 is made from the user via the manual control portion 25 in making an outgoing call. If the result is YES, control goes to step 9b. If the result of the decision is NO, control proceeds to step 9f.

In step 9b, in response to the request from the user via the manual control portion 25, records in the phone book memory 11 are read out successively. The phone numbers of the records are displayed on the LCD 14, and then control goes to step 9c.

In step 9c, a decision is made as to whether an operation for selecting any phone number displayed in step 9b is performed via the manual control portion 25. That is, the manual control portion is monitored. If such an operation is performed to select any phone number displayed in step 9b, control goes to step 9d. If such an operation is not done, control goes to step 9b.

In step 9d, a decision is made as to whether a request for referencing a redial memory stored in the RAM of the main controller 10 is made by the user via the manual control portion 25. If such a request is made, control proceeds to step 9g. If such a request is not made, control goes to step 9i.

In step 9g, in response to the user's request via the manual control portion 25, phone number data stored in the redial

memory are read out successively and displayed on the LCD 14. Then, control goes to step 9h.

In step 9h, a decision is made as to whether an operation for selecting any phone number displayed in step 9g is performed via the manual control portion 25. If such an operation is performed, control goes to step 9d. If such an operation is not performed, control proceeds to step 9g.

In step 9i, user's entry of the phone number of the party to be connected is accepted via the manual control portion 25, and then control goes to step 9d.

In step 9d, a record corresponding to the phone number selected in step 9c, the phone number selected in step 9h, or the phone number entered in step 9i is read from the phone number book memory 11. A terminal kind number and a sender information notice flag corresponding to the phone number are referenced. Then, control goes to step 9e.

In step 9e, a protocol corresponding to the terminal kind number referenced in step 9d is selected from the protocols p1-p3 stored in the ROM of the main controller 10. An outgoing call is made according to the selected protocol.

In making this outgoing call, it is determined whether information identifying this terminal is sent to the other party or not, depending on the state of the sender information notice flag corresponding to the other party by referencing the phone book memory 11.

The sequences of communications provided in accordance with the protocols p1-p3 selected in step 9e illustrated in FIG. 9 are next described.

First, communications are provided according to the protocol p1 for voice communications. The sequence is described by referring to FIG. 10.

First, the present terminal that serves as a sending terminal makes an outgoing call by sending a call setup message to the other party to be connected. At this time, the present terminal informs the other party of the transmission capabilities indicating whether it supports voice communications, via the call setup message.

If the terminal connected to the present terminal receives the call setup message, the terminal of the other party recognizes it and sends a call setup acknowledgment message to the present terminal. Then, the terminal informs the user of an incoming call by operating a tone ringer, a vibrator, a light-emitting diode, or the like and sends a calling message to the present terminal.

Then, if the user of the terminal of the other party performs an off-hook operation to respond in voice communications, then the terminal of the other party inserts information indicating the terminal kind of the present terminal or information indicating that it supports voice communications in the inter-user information notice field of the responding message. This responding message is sent to the present terminal that is a sending terminal.

The present terminal receives the above-described responding message. If the present terminal confirms that the terminal of the other party supports voice communications, the present terminal sends an acknowledging message to the terminal of the other party, and then a voice communication is started.

At this time, the present terminal executes processing for updating the contents of the phone book database in the phone book memory 11 according to the information indicating the kind of the other party, the information being received from the terminal of the other party via the inter-user information notice field. This will be described in detail below.

After end of the voice conversation, if one (the terminal of the other party in FIG. 10) of the two terminals performs an on-hook operation and the communications link is disconnected, the other terminal releases the line, thus ending the communications.

A sequence where communications are provided according to the protocol p2 for multimedia communications is next described by referring to FIG. 11.

First, the present terminal acting as a sending terminal sends a call setup message to the terminal of the other party to make an outgoing call. At this time, the present terminal informs the other party that the present terminal supports multimedia communications conforming to H.324/H.245 that are ITU-T standards, i.e., informs the other party of the communications capabilities of the present terminal.

On receiving the call setup message, the terminal of the other party recognizes it and sends a call setup acceptance message to the present terminal. Then, the terminal of the other party informs the user of an incoming call by operating a tone ringer, a vibrator, a light-emitting diode, or the like. The terminal then sends a calling message to the present terminal.

If the user of the terminal of the other party performs an off-hook operation to respond in multimedia communications, the terminal of the other party inserts information indicating the terminal kind of the present terminal or information indicating that it supports multimedia communications complying with H.324/H.245 that are ITU-T standards in the inter-user information notice field of the acknowledging message. This message is sent to the present terminal that is a sending terminal.

The present terminal receives the acknowledging message. If it confirms that the terminal of the other party provides support for multimedia communications, the present terminal sends an acknowledging message to the terminal of the other party, and multimedia communications are initiated.

At this time, the present terminal executes processing for updating the contents of the phone book database in the phone book memory 11 according to the information indicating the kind of the other party, the information being received from the terminal of the other party via the inter-user information notice field. This will be described in detail below.

In the multimedia communications, video data are sent and received according to the state of the sent/receive YES/NO flag corresponding to the connected terminal, the flag being stored in the phone book memory 11. Audio data are sent and received in a normal manner.

If the send/receive YES/NO flag indicates that sending of video data is not permitted, the multiplexing and demultiplexing portion 17 supplies only encoded audio data as transmitted data to the PHS line interface 18 via the sync bus 29.

If the send/receive YES/NO flag indicates that reception of video data is not permitted, the multiplexing and demultiplexing portion 17 extracts only the encoded audio data from the demultiplexed, transmitted data and supplies the extracted data to the voice codec 20.

As the multimedia conversion ends, if an on-hook operation is performed on one (the connected terminal in FIG. 11) of the two terminals, an end negotiation is performed between both terminals. Then, the communications link is disconnected and released. The communications end.

The sequence utilized where communications are provided according to the protocol p3 (which permits the mode

of communications to be switched to multimedia communications from voice communications) is described by referring to FIG. 12.

First, the present terminal acting as a sender terminal sends a call setup message to a terminal to be connected and makes an outgoing call. At this time, the present terminal informs the other party that the present terminal supports voice mode in an unlimited digital communications mode via the call setup message, i.e., informs the other party of the communications capabilities.

On receiving the call setup message, the terminal of the party to be connected recognizes it and informs the user of the incoming call by operating a tone ringer, a vibrator, a light-emitting diode, or the like. Then, the terminal of the other party sends a call setup acceptance message and a calling message to the present terminal sequentially.

If the user on the side of the connected terminal performs an off-hook operation and responds in voice communications, the terminal of the connected terminal inserts various kinds of information in the inter-user information notice field of the responding message. One of these various kinds of information indicates the kind of the present terminal. Another kind of information indicates the communications capabilities of the present terminal, i.e., that the terminal provides support for an unlimited digital communications mode and provides support for communications utilizing a voice encoded system in voice communications mode. The acknowledging message is sent to the present terminal that is a sender terminal.

The present terminal then makes a decision as to whether communications equivalent to the communications provided by the terminal of the connected party can be provided by the present terminal. The present terminal then inserts communication kind indicating information that is the result of the decision into the inter-user information communication field of the acknowledging message. This message is sent to the connected terminal.

If the present terminal and the connected terminal both support an unlimited digital communications mode, and if voice-encoded communications are possible in voice mode, a voice conversation complying with the encoded method is performed.

The present terminal receives information indicating the kind of the connected terminal from the connected terminal via the inter-user information notice field. Based on this information, the present terminal executes processing for updating the database of the phone book memory 11. This processing will be described in greater detail later.

Then, one terminal (the connected terminal in FIG. 12) sets the transmission capabilities to provide multimedia communications. If the other terminal (the present terminal in FIG. 12) also supports the multimedia communications, the other terminal accepts the setting. A negotiation for multimedia communications conforming to H.324/H.245 that are ITU-T standards is started between both terminals. A multimedia conversation using both video and audio data is made.

During the multimedia communications, audio data are sent and received in a normal manner, in the same way as in the case of the protocol p2. On the other hand, video data are sent and received according to the state of the send/receive YES/NO flag that is stored in the phone book memory 11 and corresponds to the connected terminal.

If the send/receive YES/NO flag indicates that transmission of video data is not permitted, the aforementioned multiplexing and demultiplexing portion 17 supplies only

encoded audio data as transmitted data to the PHS line interface 18 via the sync bus 29.

If the send/receive YES/NO flag indicates that reception of video data is not permitted, the multiplexing and demultiplexing portion 17 extracts only the encoded audio data from the demultiplexed, transmitted data and supplies the extracted data to the voice codec 20.

After end of the voice conversation, if an on-hook operation is performed on one (the terminal of the other party in FIG. 12) of the two terminals, a negotiation on the end is performed between both terminals. Then, the communications link is disconnected and released, thus ending the communications.

Processing for updating the phone book database used during communications is next described by referring to the flowchart of FIG. 13.

When a communications link is established and voice communications or multimedia communications are started, the main controller checks the terminal kind number stored corresponding to the phone number of the connected terminal (step 13a).

If "16" is stored as the terminal kind number, control goes to step 13c. If any terminal kind number other than "16" is stored, control proceeds to step 13b.

In step 13b, a decision is made to judge whether information sent from the connected terminal via the inter-user information notice field during a call setup agrees with the information stored in the phone book database of the phone book memory 11.

If they agree, this processing is ended. If they do not agree, control goes to step 13c.

In step 13c, the main controller obtains a terminal kind number corresponding to the information sent from the connected terminal via the inter-user information notice field during the call setup. The main controller stores the obtained terminal kind number in the phone book memory 11 such that it corresponds to the phone number of the connected terminal. Thus, the phone book database is updated. In this way, this processing is ended.

An operation for entering data items into the phone book database stored in the phone book memory 11 is next described by referring to the flowchart of FIG. 14.

In step 14a, the user operates the ten-key pad on the manual control portion 25 to enter the phone number of the connected terminal, thus displaying on the LCD 14 a phone number to be entered into the database. At this time, phone numbers to be redialed may also be displayed. Furthermore, when a notice of incoming calls is given, phone numbers may be displayed.

In the next step 14b, the user operates the ten-key pad on the manual control portion 25 to enter the names corresponding to the phone numbers with alphanumeric characters or Hiragana or Katakana characters (in Japanese).

In the next step 14c, image data and icons previously stored in the image storage region of the RAM in the main controller 10 are read out to select image data that is made to correspond to the phone number. This selection can be realized by user's operation on the ten-key pad. The manner in which image data is stored in the image storage region described above will be described later.

In the next step 14d, information indicating terminal kinds are displayed in the form of a menu on the LCD 14. At this time, the user operates the ten-key pad of the manual operation portion 25 to select a terminal kind number corresponding to the aforementioned phone number.

In step 14e, a display as shown in FIG. 16 is provided on the LCD 14 to ask the user whether the phone number is encrypted or not. If the user operates the ten-key pad of the manual operation portion 25 and instructs the number to be encrypted, then the encrypting flag is set to 1. Conversely, if the number is instructed not to be encrypted, the encrypting flag is set to 0.

In the next step 14f, a decision is made as to whether the phone book memory 11 has a space to enter new records.

If such a space exists, control goes to step 14g. Information input by the user in steps 14a-14e is taken as one record and entered into the phone book memory 11. The processing is then ended. On the other hand, if no space is available, the main controller informs the user of this fact and ends the processing.

It is to be noted that the information input by the user using the steps 14a-14e is not always fully entered. Records put in the phone book memory 11 may be read out later. Additional information may be added. Also, the information may be modified or erased.

It is now assumed that image data from the other party is not stored such that it corresponds to the phone book database of the other party. In this case, processing for storing the image data is performed in the manner described below. This processing is carried out during multimedia communications with the other party. This processing is illustrated in FIG. 15.

In step 15a, the user pushes ACCEPT button on the manual control portion 25. Correspondingly, image data is received from the other party. Of the received image data, one frame of image is temporarily held in a specified region of the RAM of the main controller 10.

In step 15b, image data accepted in step 15a is inserted into the image picked up by the camera portion 15 and sent to the other party. This image to be sent to the other party has a mark indicating that this image will be stored into the phone book database. On the terminal of the other party receiving the marked image, a display as shown in FIG. 17 is provided on the display portion.

In the next step 15c, the machine waits for arrival of a response from the other party. If a response indicating that the other party permits entry into the database, control goes to step 15d. If a response indicating that the entry is not permitted, control proceeds to step 15e.

In step 15d, image data put into the specified region of the RAM of the main controller 10 is stored in the image storage region of the phone book memory 11 and addressed, corresponding to the phone number of the other party. Then, the processing is ended. In step 15e, the image data put into the specified region of the RAM of the main controller 10 is erased, and then the processing is ended.

In the multimedia communications terminal of the construction described above, the kind of the connected terminal is stored in the phone book memory 11 such that it corresponds to the phone number of the connected party in the phone book database. A connection is made according to a protocol corresponding to the kind of the connected terminal.

Accordingly, the multimedia communications terminal of the construction described above can start communications in connection procedures adapted for the desired communications. Therefore, unnecessary connection procedures can be omitted. This alleviates the burden on the switching station. Hence, desired communications can be initiated quickly.

Furthermore, in the multimedia communications terminal of the construction described above, information indicating whether transmission and reception of video data is permitted or not (send/receive YES/NO flag) is stored for each phone number in the phone book memory 11. Where multimedia communications are provided, video data are sent and received according to the information described above.

Consequently, with this multimedia communications terminal, permission or inhibition of transmission and reception of video data can be determined for each individual party with which the present terminal communicates. Therefore, it is possible that audio data are sent and transmitted, while video data are only received.

Moreover, in the multimedia communications terminal of the construction described above, information (sender information notice flag) indicating whether a notice of information about the sender is given is stored for each phone number in the phone book memory 11. Information about the sender is transmitted according to the stored information.

In consequence, the decision as to whether information about the sender is sent or not can be made, depending on each individual party with which the present terminal communicates.

In addition, the multimedia communications terminal of the above-described construction once retransmits image taken from the other party and checks if the other party permits the image to be entered into the database of the present terminal. Then, the image is stored as a phone book data item. If the other party rejects it, image data indicating that the terminal of the other party supports multimedia communications is entered in the phone book database instead of the image taken from the other party.

Therefore, the multimedia communications terminal of the construction described above enables the other party to choose whether image data taken from the other party is entered in the phone book database. Therefore, the problem of infringement of privacy or the right to the portraits can be avoided. Additionally, if the other party rejects entry of taken image data, it can be seen that the other party supports multimedia communications by referring to the phone book database.

It is to be understood that the present embodiment is not limited to the embodiment described above. For instance, in the embodiment described above, information about the kind of communications is sent to the other party by inter-user information during call setup. Instead, information about the kind of communications may be sent to the other party, using transmission capabilities, subaddresses, incoming numbers, outgoing numbers, and so on.

In the embodiment described above, terminals are classified in terms of protocols into terminals supporting telephone communications services and terminals supporting multimedia communications services. Furthermore, terminals may be classified further as terminals supporting data communications services, as well as the above-described terminals. Protocols providing unlimited bearer communications are used for a call connection to a terminal that supports data communications services.

Further, terminals may be categorized in terms of communications capabilities of terminals such as transmission speed rather than kinds of transmitted data.

Where terminals are classified in terms of communication speed, they may be classified according to kinds of terminals, such as analog telephone, ISDN telephone, analog cellular phone, digital cellular phone, and PHS phone.

Where the transmission speed differs in some locations on the communication path between the present terminal and

the connected terminal, the minimum transmission speed on the communication path is stored as communications capabilities in the phone book memory 11 in a correlated relation to the telephone number of the connected party.

For example, where a connection is made from a wireless network to a terminal on a high-speed wireline network, the transmission speed on the wireless network that is lower than on the wireline network is stored in connection with the telephone number of the connected party.

Where communications with the other party should be provided, the phone book memory 11 is referenced, and communications are provided at the above-described transmission speed. This eliminates the following procedure: Communications are once started at the communication speed on the wireline network higher than the communication speed on the wireless network, and then the speed is switched to the communication speed on the wireless network. Hence, communications can be started at the communication speed on the wireless network. This alleviates the burden on the switching station. Furthermore, communications can be initiated quickly.

In the embodiment described above, image data is stored as illustrated in the flowchart of FIG. 15. Image data may also be stored by other method.

For example, image data to be entered in the phone book database is previously stored in the terminal of the other party for each individual multimedia communications terminal. When the other party requests that image data be entered into the phone book database, the image data is sent to the other party, which in turn enters the image data into the phone book database.

Where the processing for entering the video data into the database is performed in this way, the party whose video data can be entered into the database sends the video data to the other party for entry into the database. In consequence, the problem of infringement of privacy and the right to the portraits can be circumvented.

In the description given above, the phone book database of the phone book memory 11 is updated when communications are started. Alternatively, the phone book database of the phone book memory 11 may be searched at any time when outgoing and incoming calls are made, and if information indicating the kind of the terminal obtained from the other party is different from the information stored in the phone book database, the contents may be updated at any time.

Obviously, the invention can be practiced even with various modifications within the scope of the present invention which is delineated by the following claims.

What is claimed is:

1. A multimedia communications terminal capable of providing communications in terms of audio and video information, said multimedia communications terminal comprising:

other party information storage means for storing a first kind of information for discerning other party with which said multimedia communications terminal communicates and a second kind of video information such that these first and second kinds of information are correlated with each other;

an image storage YES/NO inquiry means for sending an inquiry to said other party to ask whether video data received from the other party that supports multimedia communications can be stored as said image information; and

an image information writing means for storing said image information in said other party information storage means if response to said inquiry by the image storage YES/NO inquiry means is that storing is permitted.

2. The multimedia communications terminal of claim 1, wherein said image information writing means stores given image information indicating that the terminal of said other party supports multimedia communications if response to said inquiry by the image storage YES/NO inquiry means is that storing is not permitted.

3. The multimedia communications terminal of claim 1, wherein there is further provided an image information storage detection means for sensing whether image information about said other party is stored in said other party information storage means, and wherein said image storage YES/NO inquiry means sends an inquiry to said other party to ask whether image information received from said other party can be stored as said image information if said image information storage detection means senses that image information about said other party is not stored.

4. The multimedia communications terminal of claim 1, wherein there is further provided an image data storage means for storing image data corresponding to said image data, and wherein other party information storage means stores information indicating position of image data stored in said image data storage means as said image information.

5. The multimedia communications terminal of claim 1, wherein there is further provided a responsive means for responding to an inquiry from said other party that supports multimedia communications to ask whether video data delivered from said multimedia communications terminal is allowed to be stored or not.

6. A multimedia communications system having first and second multimedia communications terminals capable of providing communications in terms of audio and video information,

said first multimedia communications terminal being equipped with a responsive means for responding to an inquiry from the second multimedia communications terminal to ask whether video data from said second multimedia communications terminal is allowed to be stored or not;

said second multimedia communications terminal comprising other party information storage means for storing information for discerning other party and image information in a correlated relation to each other, an image storage YES/NO inquiry means for sending an inquiry to said other party to ask whether video data received from said other party supporting multimedia communications can be stored as said image information; and

an image information writing means for storing said image information in said other party information storage means if response to the inquiry from said image storage YES/NO inquiry means is that storing is permitted.

7. The multimedia communications terminal of claim 1, wherein said image information writing means stores given image information indicating that said other party supports multimedia communications if response to an inquiry from said image storage YES/NO inquiry means is that storing is not permitted.

transmitted to the call originating terminals, and voices or pictures from that party are recorded in the recording part 18.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
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3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The image photography section which photos a user, and the graphic display section which displays a user's image and received image, The hand set which outputs and inputs voice, and the image codec section which elongates and decodes compression and the encoded image data and is outputted to said graphic display section while compressing and encoding the image data inputted from said image photography section, The voice codec section which elongates and decodes compression and the encoded voice data and is outputted to said hand set while compressing and encoding the voice data inputted from said hand set, Multiplexing / separation section which separates the image and voice data multiplexed while multiplexing the image data encoded in said image codec section, and the voice data encoded in said voice codec section, and is outputted to said image codec section and the voice codec section, The circuit interface section which outputs the image and voice data received from the communication line while transmitting the image and voice data multiplexed in said multiplexing / separation section to the communication line to said multiplexing / separation section, The key input section for performing input of the telephone number, selection of a function, etc., and the mode change section for performing a change in the normal mode and housesitting mode, The automatic-answering control section for answering the call automatically [when said mode change section is in housesitting mode and a message is received], The telephone number registration section for being ***** TV phone equipment and registering the telephone number, The voice-told message are recording section which accumulates a response message with voice at least one or more, The image message are recording section which accumulates a response message with an image at least one or more, The conditions those combination [which response messages accumulated according to conditions -- whether the telephone number of the master station which received a message is registered into said telephone number registration section -- into said voice-told message are recording section and said image message are recording section, or] to send out The message selection-condition registration section to register and the message selection-control section which chooses a response message and transmits based on the conditions registered into said message selection-condition registration section, TV phone equipment characterized by having the arrival-of-the-mail Records Department during the absence for recording the telephone number of the communication terminal which received a message when said mode change section was in housesitting mode etc.

[Claim 2] The clock calender section which outputs time of day and a day of the week, Which response messages accumulated according to conditions -- whether the telephone number of the time of day and the day of the week which received a message, and the master station which received a message is registered into said telephone number registration section -- into said voice-told message are recording section and said image message are recording section, or those combination The message selection-condition registration section which registers the conditions whether to send out, The message selection-control section which chooses a response message and transmits based on the conditions registered into said message selection-condition registration section in quest of arrival-of-the-mail time of day and a day of the week with reference to said clock calender section when said mode change section is in

housesitting mode and a message is received, TV phone equipment indicated by claim 1 characterized by preparation *****.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the TV phone equipment which is connected to a communication line and can communicate using the both sides of voice and an image.

[0002]

[Description of the Prior Art] The TV phone equipment which international-standards-ization of an image coding method was able to be performed in recent years, and can communicate a high-speed digital transmission way using an animation image and voice in connection with having become easily possible to use by the low running cost begins to be announced [come] from each company, and various TV phones especially equipped with the telephone answering function for the improvement in convenience are also developed.

[0003] Conventional TV phone equipment is explained below. Drawing 8 is the block diagram of conventional TV phone equipment. The image photography section in which 1 photos a user, the graphic display section as which 2 displays a user's image and received image, The image codec section which the hand set with which 3 outputs and inputs voice, and 4 elongate and decode compression and the encoded image data while compressing and encoding the image data inputted from the image photography section 1, and is outputted to the graphic display section 2, The voice codec section which elongates and decodes compression and the encoded voice data and is outputted to a hand set 3 while 5 compresses and encodes the voice data inputted from the hand set 3, Multiplexing / separation section which separates the image and voice data multiplexed while 6 multiplexed the image data encoded in the image codec section 4, and the voice data encoded in the voice codec section 5, and is outputted to the image codec section 4 and the voice codec section 5, The circuit interface section which outputs the image and voice data received from the ISDN circuit while 7 transmitted the image and voice data multiplexed in multiplexing / separation section 6 to the ISDN circuit to multiplexing / separation section 6, The mode change section for the key input section for 8 to perform input of the telephone number, selection of a function, etc. and 9 to perform a change in the normal mode and housesitting mode, A control section in order that [whole] 10 may control the whole TV phone equipment based on the directions from the key input section 8 and the mode change section 9, When the mode change section 9 is made into housesitting mode and 11 receives a message, the automatic-answering control section which performs control for answering the call automatically, and 12 are the response message are recording sections which accumulate the response message sent out by the automatic-answering control section 11.

[0004] About the conventional TV phone equipment constituted as mentioned above, the actuation at the time of the housesitting mode is explained below. Introduction and a user register the response message at the time of one kind of absence into the response message are recording section 12. Next, a user sets the mode change section 9 to housesitting mode. This sets up the whole control section 10 so that automatic answering of the automatic-answering control section 11 may be carried out at the time of arrival of the mail. Next, the circuit interface section 7 detects a call in by receiving a call setup message

from an ISDN circuit. Next, the circuit interface section 7 analyzes this call setup message, and performs the notice of a call in to the automatic-answering control section 11. Next, it is directed that the automatic-answering control section 11 transmits a call receptionist message to an ISDN circuit to the circuit interface section 7 by this. Next, according to this, when the circuit interface section 7 sends out a call receptionist message to an ISDN circuit, connection with a partner is completed. Next, the automatic-answering control section 11 is controlled after this connection termination to send out the response message accumulated into the response message are recording section 12 to an ISDN circuit. A response message is sent out through multiplexing / separation section 6 and the circuit interface section 7 by this to an ISDN circuit, and is sent to an origination-side terminal (not shown). Next, when the circuit interface section 7 receives the release message from an origination-side terminal (not shown), the automatic-answering control section 11 suspended transmission of a response message, and has ended the actuation at the time of housesitting mode while it directs that an open completion message transmits to an ISDN circuit to the circuit interface section 7.

[0005]

[Problem(s) to be Solved by the Invention] However, with the above-mentioned conventional configuration, since only one kind of response message was able to be accumulated in the response message are recording section but this same response message was unconditionally transmitted to any partners, flexible response of changing a response message according to a dispatch partner, the receipt time, a day of the week, etc. was not completed, but it had the trouble that versatility was missing. Moreover, whenever it changed the response message, the response message had to be reregistered, and it had the trouble that it was complicated and trouble lacked in charge workability. Furthermore, the telephone number of the partner who received a message at the time of housesitting mode could not be known, but it had the trouble that convenience was missing.

[0006] It aims at offering the TV phone equipment which this invention solves the above-mentioned conventional trouble, and could change the response message automatically according to the dispatch partner, arrival-of-the-mail time of day, a day of the week, etc., was excellent in versatility, could change the response message only by specifying another response message registered beforehand, is excellent in workability, and is excellent in the convenience which can know the telephone number of the partner who received a message at the time of housesitting mode.

[0007]

[Means for Solving the Problem] The TV phone equipment indicated by claim 1 of this invention in order to attain this purpose The image photography section which photos a user, and the graphic display section which displays a user's image and received image, The hand set which outputs and inputs voice, and the image codec section which elongates and decodes compression and the encoded image data and is outputted to said graphic display section while compressing and encoding the image data inputted from said image photography section, The voice codec section which elongates and decodes compression and the encoded voice data and is outputted to said hand set while compressing and encoding the voice data inputted from said hand set, Multiplexing / separation section which separates the image and voice data multiplexed while multiplexing the image data encoded in said image codec section, and the voice data encoded in said voice codec section, and is outputted to said image codec section and the voice codec section, The circuit interface section which outputs the image and voice data received from the communication line while transmitting the image and voice data multiplexed in said multiplexing / separation section to the communication line to said multiplexing / separation section, The key input section for performing input of the telephone number, selection of a function, etc., and the mode change section for performing a change in the normal mode and housesitting mode, The automatic-answering control section for answering the call automatically [when said mode change section is in housesitting mode and a message is received], The telephone number registration section for being ***** TV phone equipment and registering the telephone number, The voice-told message are recording section which accumulates a response message with voice at least two or more, The image message are recording section which accumulates a response message with an image at least two or more, The conditions those combination [which response messages accumulated according to

conditions -- whether the telephone number of the master station which received a message is registered into said telephone number registration section -- into said voice-told message are recording section and said image message are recording section, or] to send out The message selection-condition registration section to register and the message selection-control section which chooses a response message and transmits based on the conditions registered into said message selection-condition registration section, Have the configuration equipped with the arrival-of-the-mail Records Department during the absence for recording the telephone number of the communication terminal which received a message when said mode change section was in housesitting mode etc., and the TV phone equipment indicated by claim 2 is set to claim 1. The clock calender section which outputs time of day and a day of the week, Which response messages accumulated according to conditions -- whether the telephone number of the time of day and the day of the week which received a message, and the master station which received a message is registered into said telephone number registration section -- into said voice-told message are recording section and said image message are recording section, or those combination The message selection-condition registration section which registers the conditions whether to send out, The message selection-control section which chooses a response message and transmits based on the conditions registered into said message selection-condition registration section in quest of arrival-of-the-mail time of day and a day of the week with reference to said clock calender section when said mode change section is in housesitting mode and a message is received, It has preparation *****.

[0008] When arrival of the mail is disregarded and it is made not to answer the partner and time zone which are not registered into the message selection-condition registration section here, it is desirable from the field of versatility.

[0009]

[Function] Two or more response messages are accumulated in the voice-told message are recording section and the image message are recording section, and when a message is received at the time of housesitting mode, in order that the message selection-control section may transmit the response message according to the conditions registered into the message selection-condition registration section, according to the partner who received, a response message is automatically changeable only by registering which response message is transmitted to the message selection-condition registration section to which partner, with this configuration. Moreover, a response message can be changed into other response messages accumulated beforehand very easily only by changing assignment in the message selection-condition registration section. Moreover, in order to record the telephone number of the master station with which the arrival-of-the-mail Records Department received a message during absence at the time of housesitting mode etc., the partner who received a message at the time of housesitting mode can know easily who it was. Furthermore, a response message is automatically changeable by having the clock calender section with conditions, such as time of day and a day of the week which received a message.

[0010]

[Example]

(Example 1) The TV phone equipment in one example of this invention is explained below, referring to a drawing. Drawing 1 is the block diagram of the TV phone equipment in one example of this invention. 1 -- the image photography section and 2 -- the graphic display section and 3 -- a hand set and 4 -- the image codec section and 5 -- for the circuit interface section and 8, as for the mode change section and 10, the key input section and 9 are [the voice codec section and 6 / multiplexing / separation section and 7 / a whole control section and 11] automatic-answering control sections, and since these are the same as that of the conventional example, they attach the same sign and omit explanation. The telephone number registration section for 13 to register the telephone number, the voice-told message are recording section in which 14 accumulates a response message with voice at least two or more, The image message are recording section in which 15 accumulates a response message with an image at least two or more, 16 which response messages accumulated according to conditions -- whether the telephone number of the master station which received a message is registered into the telephone number registration section 13 -- into the voice-told message are recording section 14 and the image message are

MASTER - received message

recording section 15, or those combination The message selection-condition registration section which registers the conditions whether to send out, the message selection-control section which 17 chooses a response message based on the conditions registered into the message selection-condition registration section 16, and transmits, 18 is the arrival-of-the-mail Records Department during the absence for recording voice, an image, etc. from the telephone number and/or the dispatch partner of a master station who received a message when the mode change section 9 was in housesitting mode.

[0011] About the TV phone equipment in one example of this invention constituted as mentioned above, the actuation is explained below. Drawing 2 is drawing showing the message selection-condition setting screen of the TV phone equipment in one example of this invention, drawing 3 is drawing showing the message individual appointed screen of the TV phone equipment in one example of this invention, and drawing 4 is the flow chart of the TV phone equipment in one example of this invention. As for DV, the telephone number of a master station is registered into the telephone number registration section 13. And the notation which shows that a master station is a TV phone, the notation with which the telephone number is registered and DL shows that it is the usual telephone, The notation which, as for TV, the telephone number is not registered, and shows that it is a TV phone, The notation with which the telephone number is not registered and TL shows that it is the usual telephone, The registration number of a response message with each voice by which A1 thru/or A7 are accumulated in the voice-told message are recording section 14, V1, or V5 is the registration number of a response message with each image accumulated in the image message are recording section 15. Introduction and a user specify the registration number of A1 grade, and register a response message with two or more voice. After the voice codec section 5 compressed and encodes, the response message with this voice adds the above-mentioned registration number, and is accumulated in the voice-told message are recording section 14. Next, the registration number of V1 grade is specified similarly and a response message with two or more images is registered. After the image codec section 4 compressed and encodes, the response message with this image adds the above-mentioned registration number, and is accumulated in the image message are recording section 15. Next, in a message selection-condition setting screen as shown in drawing 2, a user determines the conditions which transmit each response message. Here, these conditions are registered into the message selection-condition registration section 16. For example, in drawing 2, it is set up so that the telephone number of a master station is not registered into the telephone number registration section 13, and response message A3 with voice and the response message V3 with an image may be outputted to (TV) as a response message at coincidence, when a master station is a TV phone. Moreover, when the terminal type that it is whether they are the telephone number and a TV phone wants to transmit a specific response message according to an individual to the partner registered into the telephone number registration section 13, in the message individual appointed screen as shown in drawing 3, the registration number of a response message to transmit to the partner is set up during the telephone number list registered into the telephone number registration section 13. Here, these setup is registered into the message selection-condition registration section 16 like the point. For example, to the PQR, after the response message with the voice of A6, it is set up so that a response message with the voice of A7 may be outputted.

[0012] Next, arrival-of-the-mail actuation in case the mode change section 9 is set to housesitting mode is explained. In drawing 4, the circuit interface section 7 gets to know a call in by receiving a call setup message from an ISDN circuit first. Next, the circuit interface section 7 analyzes this call setup message, and performs the notice of a call in to the automatic-answering control section 11. Next, the automatic-answering control section 11 which received the notice of a call in outputs the telephone number of a master station, and a terminal type to the message selection-control section 17. Next, the message selection-control section 17 records the telephone number of the outputted master station, and a terminal type on the arrival-of-the-mail Records Department 18 during absence (S1). Next, the message selection-control section 17 analyzes whether the response message corresponding to the dispatch partner applicable to this telephone number and a terminal type is contained in the message selection-condition registration section 16 (S2). Next, it investigates whether the response message corresponding to a dispatch partner was contained in the message selection-condition registration section 16 as a result

of this analysis (S3). When close is not, the message selection-control section 17 directs that arrival of the mail is disregarded to the automatic-answering control section 11, and directs that end all processings, and the message selection-control section 17 connects to the automatic-answering control section 11 when entering, (S4) and (S5). Next, the automatic-answering control section 11 directs to send a connection message to an ISDN circuit to the circuit interface section 7. Next, according to these directions, connection with a partner is completed because the circuit interface section 7 sends out a call receptionist message to an ISDN circuit. On the other hand, the message selection-control section 17 chooses the response message according to a dispatch partner according to the conditions registered into the message selection-condition registration section 16 from the voice-told message are recording section 14 and the image message are recording section 15 (S6). Next, it investigates whether connection with a dispatch partner was completed (S7). When it jump(s) to S7 that connection is completed when having not completed in order to wait, and it completes The response message chosen by S6 is read out of the voice-told message are recording section 14 and the image message are recording section 15. While sending these out to an ISDN circuit through multiplexing / separation section 6 and the circuit interface section 7 and sending to a master station (S8), voice, an image, etc. from a dispatch partner are recorded on the arrival-of-the-mail Records Department 18 during absence. Next, it investigates whether the release message from a master station was received after response message sending out (S9). Since when having not received waits to receive the release message from a master station, while when it jump(ed) and receives to S9 directs [the automatic-answering control section 11] that an open end message transmits to an ISDN circuit to the circuit interface section 7, sending out of a response message is stopped and all processings are ended (S10).

[0013] (Example 2) The TV phone equipment in the 2nd example of this invention is explained below, referring to a drawing. Drawing 5 is the block diagram of the TV phone equipment in the 2nd example of this invention. In 1, the image photography section and 2 a hand set and 4 for the graphic display section and 3 The image codec section, 5 multiplexing / separation section and 7 for the voice codec section and 6 The circuit interface section, In 8, the key input section and 9 a whole control section and 11 for the mode change section and 10 An automatic-answering control section, For 13, as for the voice-told message are recording section and 15, the telephone number registration section and 14 are [the image message are recording section and 18] the arrival-of-the-mail Records Department during absence, and since these are the same as that of an example 1, they attach the same sign and omit explanation. The clock calender section to which 19 outputs time of day and a day of the week, 20 which response messages accumulated according to conditions -- whether the telephone number of the time of day and the day of the week which received a message, and the master station which received a message is registered into the telephone number registration section 13 -- into the voice-told message are recording section 14 and the image message are recording section 15, or those combination The message selection-condition registration section which registers the conditions whether to send out, When the mode change section 9 is in housesitting mode and 21 receives a message, it is the message selection-control section which chooses a response message and transmits based on the conditions registered into the message selection-condition registration section 20 in quest of arrival-of-the-mail time of day and a day of the week with reference to the clock calender section 19.

[0014] About the TV phone equipment in the 2nd example of this invention constituted as mentioned above, the actuation is explained below. Drawing 6 is drawing showing the message selection-condition setting screen of the TV phone equipment in the 2nd example of this invention, and drawing 7 is the flow chart of the TV phone equipment in the 2nd example of this invention. The notation with which the notation showing the TV phone with which DV was registered, the notation showing the usual telephone into which DL was registered, A1, or A6 expresses a response message with voice, V1, or V6 is a notation showing a response message with an image, and since these are the same as that of an example 1, they attach the same sign and omit explanation. The notation with which the figure after the notation with which AM expresses the morning, the notation with which PM expresses an afternoon, and AM and PM expresses time of day, and WD expresses a weekday, and HO are the notations showing a holiday. Introduction and a user specify the registration number of A1 grade, and register two or more

response messages depended on voice and an image as well as an example 1. Next, in a message selection-condition setting screen as shown in drawing 6, as for a user, a day of the week, time of day, etc. use and determine the conditions which transmit each response message. Here, these conditions are registered into the message selection-condition registration section 20. For example, in drawing 6, by not registering the telephone number of a master station into the telephone number registration section 13, by (WD), the arrival-of-the-mail day is set up a weekday so that it may output response message A4 with voice, and the response message V4 with an image to coincidence as a response message, when arrival-of-the-mail time of day is from (AM) 0:00 before 1:00 in the morning. Moreover, time amount and a day of the week may be combined like motor octane number+PM. Moreover, to the partner by whom the telephone number is registered into the telephone number registration section 13, as shown in the example 1, you may set up so that a specific response message may be transmitted according to an individual.

[0015] Next, arrival-of-the-mail actuation in case the mode change section 9 is set to housesitting mode is explained. In drawing 7, the arrival-of-the-mail day and arrival-of-the-mail time of day which are obtained from a dispatch partner's telephone number, terminal type, and the time amount calender section 19 are first recorded on the arrival-of-the-mail Records Department 18 during absence (S11). Next, it analyzes whether a dispatch partner's telephone number and a terminal type are contained in the message selection-condition registration section 20 like an example 1 (S2). Next, it investigates whether like the example 1, when it went into conditions by S2, it was analyzed (S3). When close is not, like an example 1, arrival of the mail is disregarded, all processings are ended, and (S4) and when entering, connection is directed to the automatic-answering control section 11 like an example 1 (S5). Next, the message selection-control section 21 investigates whether time assignment is carried out in the message selection-condition registration section 20 (S12). Like [when not specified] an example 1, the voice-told message and image message suitable for conditions are chosen, and when jump(ed) and specified S7, the message selection-control section 21 reads the day of the week at the time of arrival of the mail, and time of day from the clock calender section 19, and chooses the response message corresponding to the specified time conditions from the voice-told message are recording section 14 and the image message are recording section 15 (S13). Next, it investigates whether connection was completed like an example 1 (S7). Since when having not completed waits until connection is completed, while the response message chosen by S6 or S12 is read like an example 1 and when having jump(ed) and completed to S7 transmits (S8), the voice and the image from a dispatch partner are recorded. Next, it investigates whether the release message was received like an example 1 (S9). When it is No, in order to wait for reception of a release message, it jump(s) to S9, and when it is Yes, like an example 1, response message sending out is stopped and all processings are ended (S10).

[0016]

[Effect of the Invention] As mentioned above, this invention accumulates two or more response messages in the voice-told message are recording section and the image message are recording section, and it only registers which response message is transmitted to the message selection-condition registration section to which partner. When a message is received at the time of housesitting mode, in order that the message selection-control section may transmit the response message according to the conditions registered into the message selection-condition registration section Only by being able to change a response message automatically according to the partner who received, excelling in versatility, and changing assignment in the message selection-condition registration section In order to record the telephone number of the master station with which the response message could be changed into other response messages accumulated beforehand very easily, it excelled in workability, and the arrival-of-the-mail Records Department received a message during absence at the time of housesitting mode By being able to know easily who the partner who received a message at the time of housesitting mode was, excelling in convenience, and having the clock calender section The TV phone equipment which was excellent in the versatility which can change a response message automatically with conditions, such as time of day and a day of the week which received a message, is realizable.

[Translation done.]

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TECHNICAL FIELD

[Industrial Application] This invention relates to the TV phone equipment which is connected to a communication line and can communicate using the both sides of voice and an image.

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PRIOR ART

[Description of the Prior Art] The TV phone equipment which international-standards-ization of an image coding method was able to be performed in recent years, and can communicate a high-speed digital transmission way using an animation image and voice in connection with having become easily possible to use by the low running cost begins to be announced [come] from each company, and various TV phones especially equipped with the telephone answering function for the improvement in convenience are also developed.

[0003] Conventional TV phone equipment is explained below. Drawing 8 is the block diagram of conventional TV phone equipment. The image photography section in which 1 photos a user, the graphic display section as which 2 displays a user's image and received image, The image codec section which the hand set with which 3 outputs and inputs voice, and 4 elongate and decode compression and the encoded image data while compressing and encoding the image data inputted from the image photography section 1, and is outputted to the graphic display section 2, The voice codec section which elongates and decodes compression and the encoded voice data and is outputted to a hand set 3 while 5 compresses and encodes the voice data inputted from the hand set 3, Multiplexing / separation section which separates the image and voice data multiplexed while 6 multiplexed the image data encoded in the image codec section 4, and the voice data encoded in the voice codec section 5, and is outputted to the image codec section 4 and the voice codec section 5, The circuit interface section which outputs the image and voice data received from the ISDN circuit while 7 transmitted the image and voice data multiplexed in multiplexing / separation section 6 to the ISDN circuit to multiplexing / separation section 6, The mode change section for the key input section for 8 to perform input of the telephone number, selection of a function, etc. and 9 to perform a change in the normal mode and housesitting mode, A control section in order that [whole] 10 may control the whole TV phone equipment based on the directions from the key input section 8 and the mode change section 9, When the mode change section 9 is made into housesitting mode and 11 receives a message, the automatic-answering control section which performs control for answering the call automatically, and 12 are the response message are recording sections which accumulate the response message sent out by the automatic-answering control section 11.

[0004] About the conventional TV phone equipment constituted as mentioned above, the actuation at the time of the housesitting mode is explained below. Introduction and a user register the response message at the time of one kind of absence into the response message are recording section 12. Next, a user sets the mode change section 9 to housesitting mode. This sets up the whole control section 10 so that automatic answering of the automatic-answering control section 11 may be carried out at the time of arrival of the mail. Next, the circuit interface section 7 detects a call in by receiving a call setup message from an ISDN circuit. Next, the circuit interface section 7 analyzes this call setup message, and performs the notice of a call in to the automatic-answering control section 11. Next, it is directed that the automatic-answering control section 11 transmits a call receptionist message to an ISDN circuit to the circuit interface section 7 by this. Next, according to this, when the circuit interface section 7 sends out a call receptionist message to an ISDN circuit, connection with a partner is completed. Next, the

automatic-answering control section 11 is controlled after this connection termination to send out the response message accumulated into the response message are recording section 12 to an ISDN circuit. A response message is sent out through multiplexing / separation section 6 and the circuit interface section 7 by this to an ISDN circuit, and is sent to an origination-side terminal (not shown). Next, when the circuit interface section 7 receives the release message from an origination-side terminal (not shown), the automatic-answering control section 11 suspended transmission of a response message, and has ended the actuation at the time of housesitting mode while it directs that an open completion message transmits to an ISDN circuit to the circuit interface section 7.

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EFFECT OF THE INVENTION

[Effect of the Invention] As mentioned above, this invention accumulates two or more response messages in the voice-told message recording section and the image message recording section, and it only registers which response message is transmitted to the message selection-condition registration section to which partner. When a message is received at the time of housesitting mode, in order that the message selection-control section may transmit the response message according to the conditions registered into the message selection-condition registration section Only by being able to change a response message automatically according to the partner who received, excelling in versatility, and changing assignment in the message selection-condition registration section In order to record the telephone number of the master station with which the response message could be changed into other response messages accumulated beforehand very easily, it excelled in workability, and the arrival-of-the-mail Records Department received a message during absence at the time of housesitting mode By being able to know easily who the partner who received a message at the time of housesitting mode was, excelling in convenience, and having the clock calendar section The TV phone equipment which was excellent in the versatility which can change a response message automatically with conditions, such as time of day and a day of the week which received a message, is realizable.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, with the above-mentioned conventional configuration, since only one kind of response message was able to be accumulated in the response message recording section but this same response message was unconditionally transmitted to any partners, flexible response of changing a response message according to a dispatch partner, the receipt time, a day of the week, etc. was not completed, but it had the trouble that versatility was missing. Moreover, whenever it changed the response message, the response message had to be reregistered, and it had the trouble that it was complicated and trouble lacked in charge workability. Furthermore, the telephone number of the partner who received a message at the time of housesitting mode could not be known, but it had the trouble that convenience was missing.

[0006] It aims at offering the TV phone equipment which this invention solves the above-mentioned conventional trouble, and could change the response message automatically according to the dispatch partner, arrival-of-the-mail time of day, a day of the week, etc., was excellent in versatility, could change the response message only by specifying another response message registered beforehand, is excellent in workability, and is excellent in the convenience which can know the telephone number of the partner who received a message at the time of housesitting mode.

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MEANS

[Means for Solving the Problem] The TV phone equipment indicated by claim 1 of this invention in order to attain this purpose The image photography section which photos a user, and the graphic display section which displays a user's image and received image, The hand set which outputs and inputs voice, and the image codec section which elongates and decodes compression and the encoded image data and is outputted to said graphic display section while compressing and encoding the image data inputted from said image photography section, The voice codec section which elongates and decodes compression and the encoded voice data and is outputted to said hand set while compressing and encoding the voice data inputted from said hand set, Multiplexing / separation section which separates the image and voice data multiplexed while multiplexing the image data encoded in said image codec section, and the voice data encoded in said voice codec section, and is outputted to said image codec section and the voice codec section, The circuit interface section which outputs the image and voice data received from the communication line while transmitting the image and voice data multiplexed in said multiplexing / separation section to the communication line to said multiplexing / separation section, The key input section for performing input of the telephone number, selection of a function, etc., and the mode change section for performing a change in the normal mode and housesitting mode, The automatic-answering control section for answering the call automatically [when said mode change section is in housesitting mode and a message is received], The telephone number registration section for being ***** TV phone equipment and registering the telephone number, The voice-told message are recording section which accumulates a response message with voice at least two or more, The image message are recording section which accumulates a response message with an image at least two or more, The conditions those combination [which response messages accumulated according to conditions -- whether the telephone number of the master station which received a message is registered into said telephone number registration section -- into said voice-told message are recording section and said image message are recording section, or] to send out The message selection-condition registration section to register and the message selection-control section which chooses a response message and transmits based on the conditions registered into said message selection-condition registration section, Have the configuration equipped with the arrival-of-the-mail Records Department during the absence for recording the telephone number of the communication terminal which received a message when said mode change section was in housesitting mode etc., and the TV phone equipment indicated by claim 2 is set to claim 1. The clock calender section which outputs time of day and a day of the week, Which response messages accumulated according to conditions -- whether the telephone number of the time of day and the day of the week which received a message, and the master station which received a message is registered into said telephone number registration section -- into said voice-told message are recording section and said image message are recording section, or those combination The message selection-condition registration section which registers the conditions whether to send out, The message selection-control section which chooses a response message and transmits based on the conditions registered into said message selection-condition registration section in quest of arrival-of-the-mail time of day and a day of the week with reference to said clock calender section when said mode change section is in

housesitting mode and a message is received, It has preparation *****.

[0008] When arrival of the mail is disregarded and it is made not to answer the partner and time zone which are not registered into the message selection-condition registration section here, it is desirable from the field of versatility.

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OPERATION

[Function] Two or more response messages are accumulated in the voice-told message are recording section and the image message are recording section, and when a message is received at the time of housesitting mode, in order that the message selection-control section may transmit the response message according to the conditions registered into the message selection-condition registration section, according to the partner who received, a response message is automatically changeable only by registering which response message is transmitted to the message selection-condition registration section to which partner, with this configuration. Moreover, a response message can be changed into other response messages accumulated beforehand very easily only by changing assignment in the message selection-condition registration section. Moreover, in order to record the telephone number of the master station with which the arrival-of-the-mail Records Department received a message during absence at the time of housesitting mode etc., the partner who received a message at the time of housesitting mode can know easily who it was. Furthermore, a response message is automatically changeable by having the clock calender section with conditions, such as time of day and a day of the week which received a message.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram of the TV phone equipment in one example of this invention

[Drawing 2] Drawing showing the message selection-condition setting screen of the TV phone equipment in one example of this invention

[Drawing 3] Drawing showing the message individual appointed screen of the TV phone equipment in one example of this invention

[Drawing 4] The flow chart of the TV phone equipment in one example of this invention

[Drawing 5] The block diagram of the TV phone equipment in the 2nd example of this invention

[Drawing 6] Drawing showing the message selection-condition setting screen of the TV phone equipment in the 2nd example of this invention

[Drawing 7] The flow chart of the TV phone equipment in the 2nd example of this invention

[Drawing 8] The block diagram of conventional TV phone equipment

[Description of Notations]

1 Image Photography Section

2 Graphic Display Section

3 Hand Set

4 Image Codec Section

5 Voice Codec Section

6 Multiplexing / Separation Section

7 Circuit Interface Section

8 Key Input Section

9 Mode Change Section

10 Whole Control Section

11 Automatic-Answering Control Section

12 Response Message Are Recording Section

13 Telephone Number Registration Section

14 Voice-told Message Are Recording Section

15 Image Message Are Recording Section

16 Message Selection-Condition Registration Section

17 Message Selection-Control Section

18 He is Arrival-of-the-Mail Records Department During Absence.

19 Clock Calender Section

20 Message Selection-Condition Registration Section

21 Message Selection-Control Section

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DRAWINGS

[Drawing 2]

メッセージ選択条件

メッセージ選択条件を入力してください

| 条 件 | 応答メッセージ |
|-------|---------|
| 1. DV | A1+V1 |
| 2. DL | A2 |
| 3. TV | A3+V3 |
| 4. TL | A4 |
| 5. | |
| 6. | |
| 7. | |

[Drawing 6]

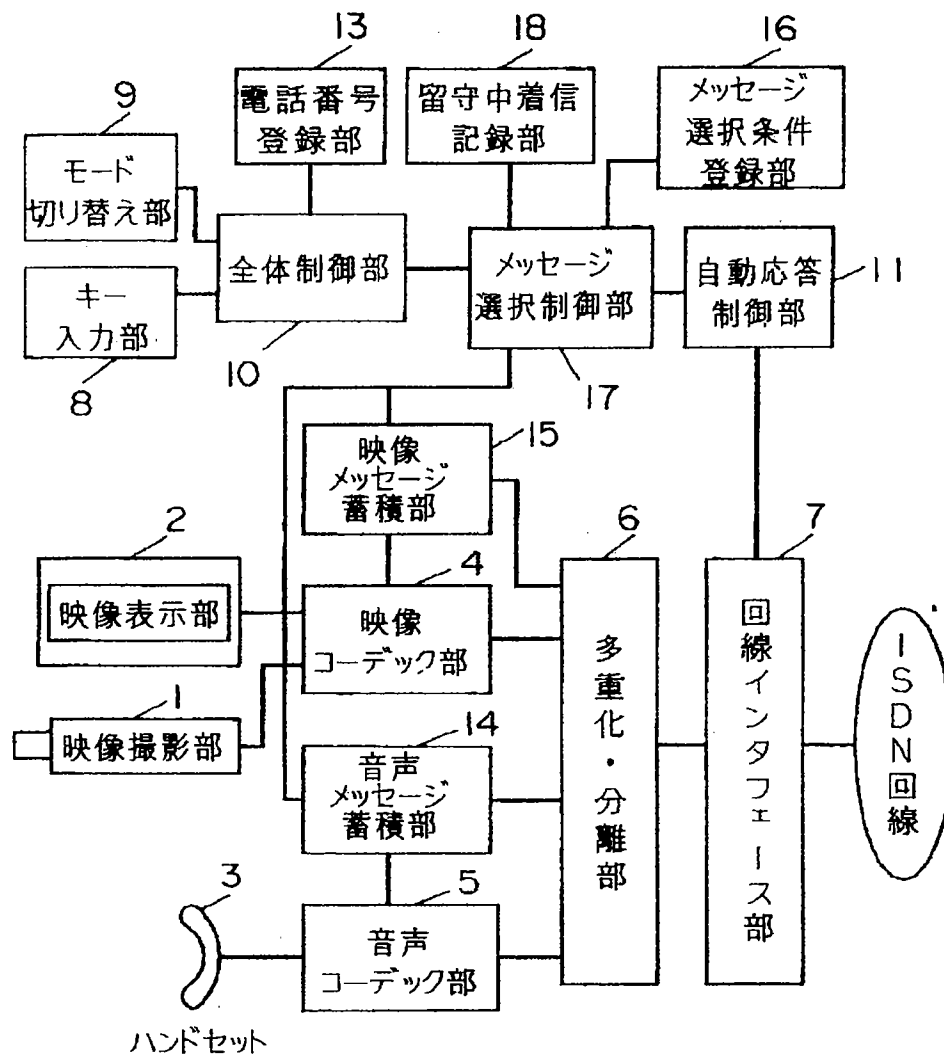
メッセージ選択条件

メッセージ選択条件を入力してください

| 条 件 | 応答メッセージ |
|-------------------|---------|
| 1. DV | A1+V1 |
| 2. DL | A2 |
| 3. AM+WD | A3+V3 |
| 4. AM0:00~1:00+WD | A4+V4 |
| 5. PM1:00~+WD | A5+V5 |
| 6. HO | A6+V6 |
| 7. | |

[Drawing 1]

Drawing 1

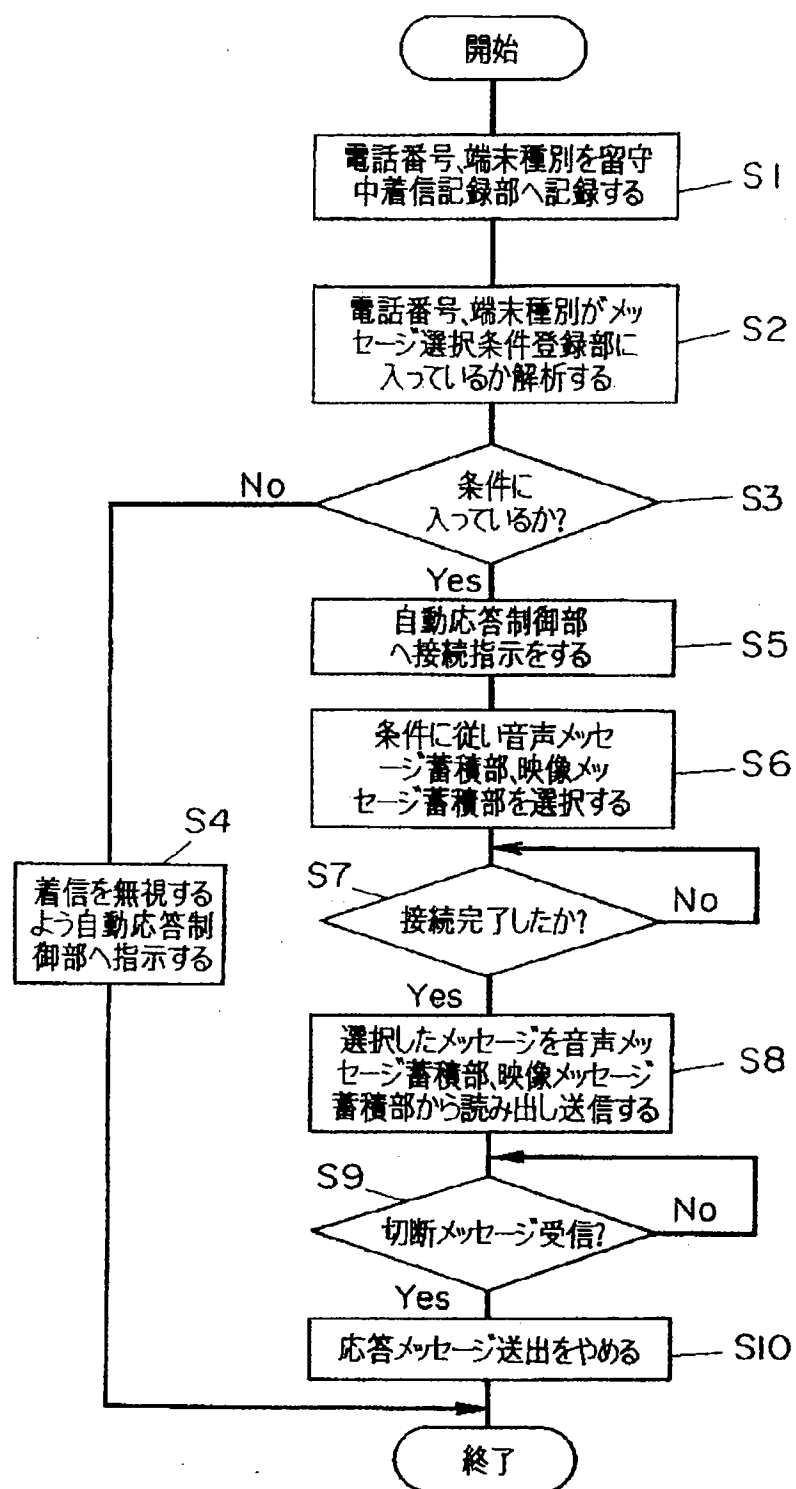


- 4: Image Codec
 9: Voice Codec
 6: MUX/DEMUX
 11: automatic
 Answer control
 section
 13: Telephone no.
 registration
 14: Storage for
 response
 audio message
 15: Storage for
 response
 image message

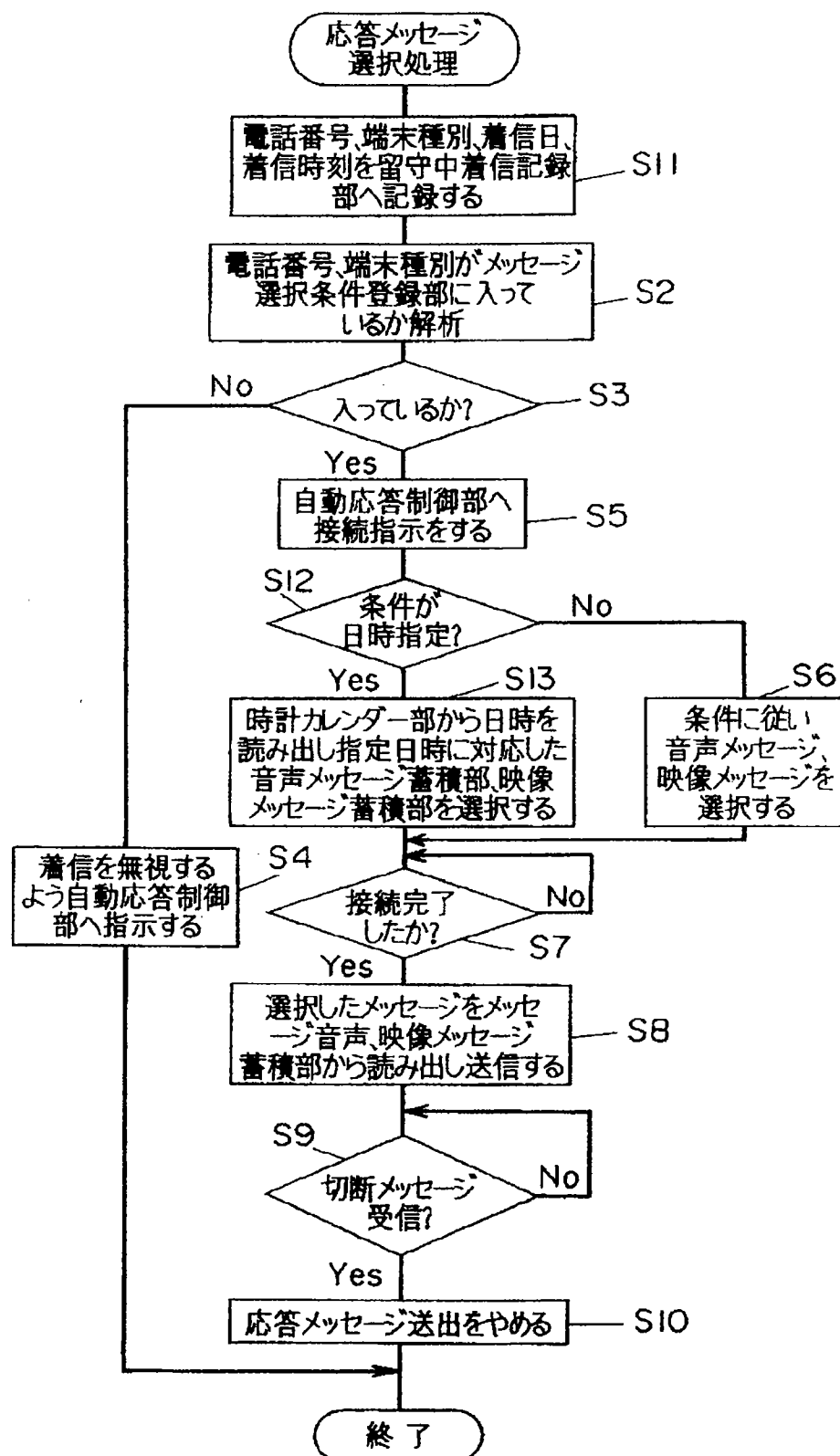
[Drawing 3]

| 電話番号リスト | | |
|---------|------------|-------|
| 名前 | 番号 | 応答 |
| 1. ABC | 0123456789 | A1+V1 |
| 2. DEF | 1357901099 | A2 |
| 3. GHI | 2468010000 | A3+V3 |
| 4. JKL | 3691234594 | V4 |
| 5. MNO | 1111111111 | A5+V5 |
| 6. PQR | 1212121212 | A6+A7 |
| 7. STU | 2323232323 | |
| 8. VWX | 9999999999 | |
| 9. YZ | 1009875430 | |
| 10. ZZZ | 0987876660 | |

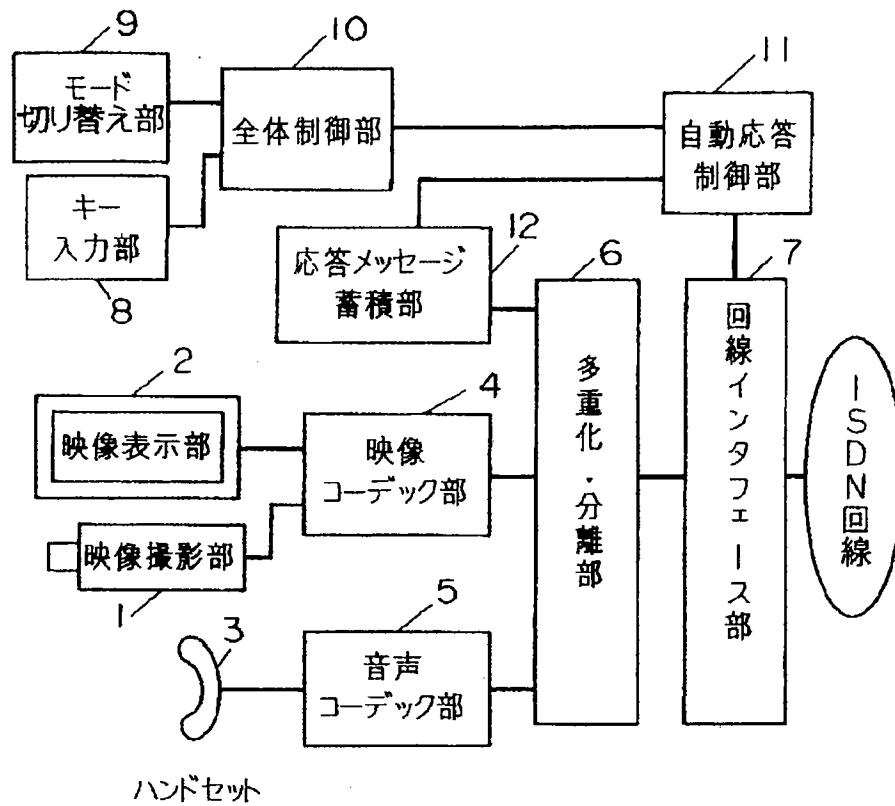
[Drawing 4]



[Drawing 5]



[Drawing 8]



[Translation done.]

PATENT ABSTRACTS OF JAPAN

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TOSHIBA AVE CO LTD

(22)Date of filing : 18.02.1998

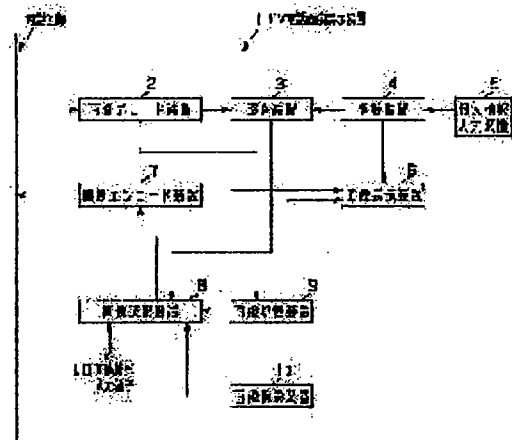
(72)Inventor : SAIKI TAKASHI
YAMAZAKI YUKO

(54) DISPLAY DEVICE FOR IMAGE OF VIDEO TELEPHONE SET

(57)Abstract:

PROBLEM TO BE SOLVED: To enhance the operating convenience in the case of sending/receiving character information such as automatic answering message by selecting image data sent to an opposite party to secure the privacy and providing a character entry function.

SOLUTION: A collation device 3 collates image data such as a name, a telephone number and data representing image and audio data decoded by an image decoder 2 with personal information data entered from a personal information entry device 5 and registered in a registration device 4. The result of collation is given to an image selector 8, by which image data sent to an opposite party are selected automatically or manually. Furthermore, a character input device enters a character and a character image converter converts the character into image data to provide a character entry function. Thus, the operating convenience, in the case of sending/receiving the character information such as an automatic answering message, is enhanced.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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CLAIMS

[Claim(s)]

[Claim 1] The individual humanity news input device which inputs individual humanity news data, and the registration equipment which registers the inputted individual humanity news data, The image decoding equipment which extracts and decodes data from the telephone signal which received from the telephone line, The collating unit which collates the image data decoded by said image decoding equipment, and the individual humanity news data registered into said registration equipment, The image storage which memorizes the image data from said image decoding equipment, or the image data for transmission, The image photography equipment which photos a direct photographic subject and is changed into image data, and the image selecting arrangement which chooses one from said image photography equipment, an image external input terminal, or said image store of image data by the result of said collating unit, TV telephone image display device characterized by providing the image encoding equipment which encodes the image data chosen by said image selecting arrangement, and the image display device which displays image data.

[Claim 2] TV telephone image display device according to claim 1 which collates the image data decoded by said image decoding equipment, and the individual humanity news data registered into said registration equipment with said collating unit, and is characterized by choosing the image data of the photographic subject radiographed by said image photography equipment with said image selecting arrangement when in agreement.

[Claim 3] Said image selecting arrangement is claim 1 characterized by having a manual selection means, or TV telephone image display device given in two.

[Claim 4] The individual humanity news input device which inputs individual humanity news data, and the registration equipment which registers the inputted individual humanity news data, The image decoding equipment which extracts and decodes data from the telephone signal which received from the telephone line, The collating unit which collates the image data decoded by said image decoding equipment, and the individual humanity news data registered into said registration equipment, The image storage which memorizes the image data from said image decoding equipment, or the image data for transmission, The alphabetic character input device which inputs an alphabetic character, and the alphabetic character image transformation equipment which changes the inputted alphabetic character into image data, and is outputted to said image storage, The image photography equipment which photos a direct photographic subject and is changed into image data, and the image selecting arrangement which chooses one from said image photography equipment, an image external input terminal, or said image store of image data by the result of said collating unit, TV telephone image display device characterized by providing the image encoding equipment which encodes the image data chosen by said image selecting arrangement, and the image display device which displays image data.

[Claim 5] When said image selecting arrangement is connected to an answering machine mode input terminal and answering machine mode is set up by the answering machine mode input While making it possible to choose the image data memorized by said image store, to output to said image encoding equipment, and to transmit to the other party TV telephone image display device according to claim 4

characterized by what the telephone signal transmitted from the other party is decoded to image data with said image decoding equipment, and is memorized to said image storage.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to TV telephone image display device controlled by TV which has telephone carrier transmitter ability, a personal computer, etc.

[0002]

[Description of the Prior Art] Conventionally, TV telephone image display device 1 consists of image decoding equipment 2, image encoding equipment 7, an image display device 6, and image photography equipment 11 grade, as shown in drawing 5, and it is carried in telephone, a personal computer, etc.

[0003] Here, image decoding equipment 2 changes the telephone signal from the telephone line into image data, and displays image data in an image display device 6. Moreover, image encoding equipment 7 changes the image data from image photography equipment 11, and sends it into the telephone line.

[0004] Such a TV telephone image display device 1 calls a partner by telephone, with a counterpart lump and image encoding equipment 7, changes image data and sends into the telephone line the image which should be sent to image photography equipment 11. TV telephone image display device 1 of the other party receives the telephone signal from the telephone line, with image decoding equipment 2, forms image data and displays image data on an image display device 6.

[0005] Moreover, image data can be sent also from a partner and the image data which received this and has been sent by the partner can be displayed on an image display device 6.

[0006] Since its figure is always displayed on the image display device 6 of the other party when operating these TV telephone image display device 1 and using a telephone, protection of privacy is becoming difficult to a sudden telephone or the telephone from those who do not know.

[0007] Moreover, since an entry of data is only image photography equipment 11 fundamentally, an alphabetic character is written and an activity time-consuming [of photoing it] is needed.

[0008]

[Problem(s) to be Solved by the Invention] Since their figure and the scenery in a house were always conventionally displayed on the image display device 6 of the partner of a telephone like the above to a sudden telephone or the telephone from those who do not know, there was a problem that protection of privacy was becoming difficult. Moreover, when it was going to transmit information in written form, it wrote to the alphabetic character once, the activity time-consuming [of photoing it] was needed, and there was a problem of being user-unfriendly.

[0009] Then, it aims at offering TV telephone image display device which can improve the user-friendliness when transmitting and receiving text, such as an answering machine message, by this invention could choose the image data which transmits to a partner for protection of privacy in view of the above-mentioned problem in TV, a personal computer, etc. which have telephone carrier transmitter ability, and having prepared the alphabetic character input function.

[0010]

[Means for Solving the Problem] The individual humanity news input unit into which invention according to claim 1 inputs individual humanity news data, The registration equipment which registers

the inputted individual humanity news data, and the image decoding equipment which extracts and decodes data from the telephone signal which received from the telephone line, The collating unit which collates the image data decoded by said image decoding equipment, and the individual humanity news data registered into said registration equipment, The image storage which memorizes the image data from said image decoding equipment, or the image data for transmission, The image photography equipment which photos a direct photographic subject and is changed into image data, and the image selecting arrangement which chooses one from said image photography equipment, an image external input terminal, or said image store of image data by the result of said collating unit, It is characterized by providing the image encoding equipment which encodes the image data chosen by said image selecting arrangement, and the image display device which displays image data.

[0011] According to invention of claim 1, individual humanity news data, such as an identifier, the telephone number, an image, and voice, can be registered. Moreover, image data, such as an identifier transmitted and decoded from the other party, the telephone number, an image, and voice, and the registered individual humanity news data can be collated. Moreover, TV telephone image display device which can choose the image data which transmits to a partner by the result of a collating unit is realizable.

[0012] Invention according to claim 2 collates the image data decoded by said image decoding equipment, and the individual humanity news data registered into said registration equipment with said collating unit, and when in agreement, it is characterized by choosing the image data of the photographic subject radiographed by said image photography equipment with said image selecting arrangement.

[0013] When according to invention of claim 2 the image data transmitted and decoded from the other party and the registered individual humanity news data are collated and it is in agreement as a result of collating, the image data of photographic subjects, such as a user's figure radiographed with image photography equipment and scenery in a house, is chosen as image data which transmits to the other party, and TV telephone image display device which can be transmitted can be realized.

[0014] Invention according to claim 3 is characterized by equipping said image selecting arrangement with a manual selection means.

[0015] According to invention of claim 3, it is not concerned with the collated result of the image data transmitted and decoded from the other party, and the registered individual humanity news data, but a user operates an image selecting arrangement manually and can realize TV telephone image display device which can choose freely the image data which transmits to the other party.

[0016] The individual humanity news input unit into which invention according to claim 4 inputs individual humanity news data, The registration equipment which registers the inputted individual humanity news data, and the image decoding equipment which extracts and decodes data from the telephone signal which received from the telephone line, The collating unit which collates the image data decoded by said image decoding equipment, and the individual humanity news data registered into said registration equipment, The image storage which memorizes the image data from said image decoding equipment, or the image data for transmission, The alphabetic character input device which inputs an alphabetic character, and the alphabetic character image transformation equipment which changes the inputted alphabetic character into image data, and is outputted to said image storage, The image photography equipment which photos a direct photographic subject and is changed into image data, and the image selecting arrangement which chooses one from said image photography equipment, an image external input terminal, or said image store of image data by the result of said collating unit, It is characterized by providing the image encoding equipment which encodes the image data chosen by said image selecting arrangement, and the image display device which displays image data.

[0017] According to invention of claim 4, individual humanity news data, such as an identifier, the telephone number, an image, and voice, can be registered, and the image data which transmits to a partner by the result of having collated image data, such as an identifier transmitted and decoded, the telephone number, an image, and voice, and the registered individual humanity news data can be chosen from the other party. Moreover, an alphabetic character is inputted, and while being able to transmit and receive the information in alphabetic characters, such as an answering machine message, easily by

having prepared the alphabetic character input function changed into image data, TV telephone image display device which can be easily used also for a person a lug and an eye is realizable.

[0018] When said image selecting arrangement is connected to an answering machine mode input terminal and answering machine mode is set up by the answering machine mode input, while invention according to claim 5 makes it possible to choose the image data memorized by said image store, to output to said image encoding equipment, and to transmit to the other party, it decodes the telephone signal transmitted from the other party to image data with said image decoding equipment, and is characterized by what memorizes to said image store.

[0019] When according to invention of claim 5 it is switched to answering machine mode and the answering machine function is enabled by giving an answering machine mode input to an image selecting arrangement, image data, such as a memorized answering machine message, can be transmitted to the other party. Moreover, after transmitting the response from the other party according to a user's answering machine message from the other party and memorizing the decoded image data, a user can realize TV telephone image display device which can see this with an image display device.

X [0020] TV telephone image display device of this invention according to claim 1 to 5 can operate and choose the image data which a user transmits to a partner according to a partner's telephone with automatic or hand control, and can protect privacy. Moreover, while being able to transmit and receive the information in alphabetic characters, such as an answering machine message, easily, TV telephone image display device which can be easily used also for a person a lug and an eye is realizable.

[0021]

[Embodiment of the Invention] The gestalt of operation of this invention is explained with reference to drawing 4 from drawing 1. Drawing 1 is the block diagram showing TV telephone image display device 1 by the gestalt of operation of the 1st of this invention. The same sign is attached and explained to the same parts of drawing 1 and drawing 5.

[0022] In drawing 1, TV telephone image display device 1 consists of image decoding equipment 2, a collating unit 3, registration equipment 4, the individual humanity news input unit 5, an image display device 6, image encoding equipment 7, the image selecting arrangement 8, image storage 9, an image external input terminal 10, and image photography equipment 11. The image external input terminal 10 is connected to TV, VTR, a movie, a camera, etc.

[0023] In addition, an image display device 6 be connect to registration equipment 4, the image storage 9, and the image selecting arrangement 8, and TV telephone image display device 1 by the gestalt of operation of the 1st of this invention be make the configuration which be make to display the content of registration, the content of storage, or the content of selection of individual humanity news data on an image display device 6, and can check it in each equipment. | *depr*

[0024] When registering individual humanity news into TV telephone image display device 1, TV telephone image display device 1 by the gestalt of operation of this invention inputs individual humanity news data, such as an identifier of persons of the arbitration selected beforehand, such as a family and an acquaintance, the telephone number, an image, and voice, from the individual humanity news input unit 5, and serves as the completion of registration by registering with registration equipment 4. Thereby, individual humanity news data, such as an identifier, the telephone number, an image, and voice, can be registered.

[0025] Next, the function for every equipment is explained.

[0026] Image decoding equipment 2 incorporates the telephone signal from the telephone line, extracts data, such as an identifier, the telephone number, an image, and voice, decodes this, and changes it into image data. Moreover, image decoding equipment 2 can store in the image store 9 the image data which is connected to the image store 9 and transmitted from the other party.

[0027] If the image data decoded by image decoding equipment 2 has the existence of data checked in a collating unit 3 and has data, it will be collated with the individual humanity news data which inputted from the individual humanity news input device 5 previously, and were registered into registration equipment 4, and will be processed with the image selecting arrangement 8. On the other hand, if there are no data, a telephone will be closed for end processing.

[0028] In the image selecting arrangement 8, it is based on the result collated in the collating unit 3. [whether the image data (a user's figure, scenery in a house, etc.) of the photographic subject radiographed by image photography equipment 11 in the image data which transmits to a partner is displayed, and] It chooses whether the external input image from TV and VTR which were connected to the image external input terminal 10, a movie, a camera, etc. is displayed, or it is made the image data beforehand memorized by the image store 9. On the other hand, it cannot be concerned with the collated result, but a user can operate the image selecting arrangement 8 manually, and the image data which transmits to a partner can also be chosen freely.

[0029] The image store 9 can memorize the image data which transmits to the other party, and the image data transmitted from the other party.

[0030] The image data chosen with the image selecting arrangement 8 is sent to image encoding equipment 7.

[0031] Image encoding equipment 7 changes the selected image data into a telephone signal, encodes it, sends it into the telephone line, and is transmitted to the other party.

[0032] By these functions, individual humanity news data, such as an identifier, the telephone number, an image, and voice, can be registered, and image data, such as an identifier transmitted and decoded from the other party, the telephone number, an image, and voice, and the registered individual humanity news data can be collated. Moreover, when the image data decoded by the result of a collating unit 3 and the registered individual humanity news data are in agreement, the image data of the photographic subjects (a user's figure, scenery in a house, etc.) radiographed with image photography equipment 11 can be chosen as image data which transmits to the other party.

[0033] Next, actuation of the 1st gestalt of this operation is explained with reference to drawing 3. Drawing 3 is a flow chart explaining actuation from collating of data when the telephone call in drawing 1 has been got to selection of image data.

[0034] In drawing 3, when the telephone call has been got, from the telephone signal transmitted by the partner, image decoding equipment 2 extracts data, such as an identifier, the telephone number, an image, and voice, they are decoded, and it incorporates as image data. The existence of the image data decoded by the collating unit 3 is checked (step S1), and if there is nothing, a telephone will be closed for end processing (step S5).

[0035] If there is image data decoded by image decoding equipment 2, a collating unit 3 will perform collating with the data and the individual humanity news data already registered by registration equipment 4 (step S2).

[0036] On the other hand, it cannot be concerned with the result collated with the collating unit 3, but while a user checks the content of selection with an image display device 6, the image selecting arrangement 8 can be operated manually, and the image data which transmits to a partner can also be chosen freely. *man*

[0037] If in agreement with the registered data as a result of collating (step S3), the image data which displays the photographic subjects (a user's figure, scenery in a house, etc.) radiographed by image photography equipment 11 will be chosen with the image selecting arrangement 8 (step S4), and it will become processing termination (step S5).

[0038] If not in agreement with the registered individual humanity news data as a result of collating (step S3) In the external input image photoed with TV and VTR which were connected to the image external input terminal 10, a movie, a camera, etc. Or when judging whether the image data beforehand memorized by the image store 9 is chosen (step S6) and choosing an external input image, it becomes step 7 and becomes processing termination (step S5). *X*

[0039] When choosing the image data memorized by the image store 9, it becomes step 8 and becomes processing termination (step S5).

[0040] Next, TV telephone image display device 1 by the gestalt of operation of the 2nd of this invention is explained. Drawing 2 is the block diagram showing TV telephone image display device 1 by the gestalt of operation of the 2nd of this invention. The same sign is attached and explained to the same parts of drawing 1, drawing 2, and drawing 5.

[0041] In drawing 2, TV telephone image display device 1 consists of image decoding equipment 2, a collating unit 3, registration equipment 4, the individual humanity news input unit 5, an image display device 6, image encoding equipment 7, the image selecting arrangement 8, the image storage 9, an image external input terminal 10, image photography equipment 11, and an answering machine mode input terminal 14. The image external input terminal 10 is connected to TV, VTR, a movie, a camera, etc. Moreover, it connects with the image selecting arrangement 8, and the answering machine mode input terminal 14 can be switched to answering machine mode by actuation of the answering machine mode input terminal 14.

[0042] In addition, an image display device 6 be connect to registration equipment 4, the image storage 9, the image selecting arrangement 8, and alphabetic character image transformation equipment 12, and TV telephone image display device 1 by the gestalt of operation of the 2nd of this invention be make the configuration which be make to display the content of registration, the content of storage, or the content of selection of individual humanity news data on an image display device 6, and can check it in each equipment.

[0043] When registering individual humanity news data into TV telephone image display device 1 by the gestalt of operation of the 2nd of this invention, it is the same registration approach as TV telephone image display device 1 by the gestalt of operation of the 1st of this invention explained previously. Moreover, although the same is said of the function for every equipment of image decoding equipment 2, a collating unit 3, registration equipment 4, the individual humanity news input unit 5, an image display device 6, image encoding equipment 7, the image external input terminal 10, and image photography equipment 11, the image selecting arrangement 8 differs only from the image storage 9. Moreover, the alphabetic character input unit 13, alphabetic character image transformation equipment 12, and the answering machine mode input terminal 14 are added.

[0044] Next, each function of the image selecting arrangement 8, the image storage 9, the alphabetic character input unit 13, alphabetic character image transformation equipment 12, and the answering machine mode input terminal 14 is explained.

[0045] The alphabetic character input unit 13 can input an alphabetic character, and the inputted alphabetic character is changed into image data by alphabetic character image transformation equipment 12. Image data, such as a changed answering machine message, is memorized by the image storage 9.

[0046] The image store 9 can memorize image data, such as an answering machine message transmitted to the other party, and the image data transmitted from the other party.

[0047] When the answering machine mode input terminal 14 is connected to the image selecting arrangement 8 and answering machine mode is set up by the answering machine mode input, while making it possible to choose image data, such as an answering machine message memorized by the image store 9, to output to image encoding equipment 7, and to transmit to the other party, the telephone signal transmitted from the other party is decoded to image data with image decoding equipment 7, and it memorizes to the image store 9.

[0048] By these functions, text, such as an answering machine message, can be inputted, and it can transmit and receive as a partner.

[0049] Next, actuation of the gestalt of operation of the 2nd of this invention is explained with reference to drawing 4. Since the actuation from collating of data when the telephone call has been got to selection of image data is the same as actuation of the 1st gestalt of this operation explained previously, actuation of image selection when using the alphabetic character input function of the 2nd gestalt of this operation for an answering machine is explained.

[0050] Drawing 4 is a flow chart explaining actuation of image selection when enabling the answering machine function by actuation of the answering machine mode input terminal 14 in drawing 2.

→ [0051] First, when it judges whether a user's answering machine function is set up (step S11), the telephone call has been got from the other party and a user's answering machine function is not effective, it shifts to the flow chart which performs actuation from collating of data when the telephone call of drawing 3 has been got to selection of image data (step S17).

[0052] When a user's answering machine function is effective, the image data of the answering machine

message which already inputted from the individual humanity news input device 5, and was registered by registration equipment 4 is chosen with the image selecting arrangement 8, and it encodes with image encoding equipment 7, and changes into a telephone signal, this is sent into the telephone line, and it transmits to the other party (step S12).

[0053] Moreover, a judgment whether there is any response from the other party according to the answering machine message from a user or there is nothing is made (step S14), and when it is, after it decodes the telephone signal transmitted from the other party with image decoding equipment 2 and the image store 9 memorizes as image data (step S15), a user can see this with an image display device 6.

[0054] Moreover, it becomes processing termination when there is no response from the other party (step S16).

[0055] In addition, when a user telephones, the position of the other party and a user of actuation of the answering machine function of the other party is the same as that of explanation of drawing 4 only by putting in and changing.

[0056] the image of the photographic subjects (a user's figure, scenery in a house, etc.) radiographed with image photography equipment 11 by these -- or control of transmission and reception of text, such as making automatic selection of another image and an answering machine message, is performed.

[0057]

[Effect of the Invention] TV telephone image display device which can improve the user-friendliness when transmitting and receiving text, such as an answering machine message, by could choose the image data which transmits to a partner for protection of privacy by having prepared the function register individual humanity news data, in TV, a personal computer, etc. which have telephone carrier transmitter ability according to this invention as stated above, and having prepared the alphabetic character input function is realizable.

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TECHNICAL FIELD

[Field of the Invention] This invention relates to TV telephone image display device controlled by TV which has telephone carrier transmitter ability, a personal computer, etc.

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PRIOR ART

[Description of the Prior Art] Conventionally, TV telephone image display device 1 consists of image decoding equipment 2, image encoding equipment 7, an image display device 6, and image photography equipment 11 grade, as shown in drawing 5, and it is carried in telephone, a personal computer, etc.

[0003] Here, image decoding equipment 2 changes the telephone signal from the telephone line into image data, and displays image data in an image display device 6. Moreover, image encoding equipment 7 changes the image data from image photography equipment 11, and sends it into the telephone line.

[0004] Such a TV telephone image display device 1 calls a partner by telephone, with a counterpart lump and image encoding equipment 7, changes image data and sends into the telephone line the image which should be sent to image photography equipment 11. TV telephone image display device 1 of the other party receives the telephone signal from the telephone line, with image decoding equipment 2, forms image data and displays image data on an image display device 6.

[0005] Moreover, image data can be sent also from a partner and the image data which received this and has been sent by the partner can be displayed on an image display device 6.

[0006] Since its figure is always displayed on the image display device 6 of the other party when operating these TV telephone image display device 1 and using a telephone, protection of privacy is becoming difficult to a sudden telephone or the telephone from those who do not know.

[0007] Moreover, since an entry of data is only image photography equipment 11 fundamentally, an alphabetic character is written and an activity time-consuming [of photoing it] is needed.

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EFFECT OF THE INVENTION

[Effect of the Invention] TV telephone image display device which can improve the user-friendliness when transmitting and receiving text, such as an answering machine message, by could choose the image data which transmits to a partner for protection of privacy by having prepared the function register individual humanity news data, in TV, a personal computer, etc. which have telephone carrier transmitter ability according to this invention as stated above, and having prepared the alphabetic character input function is realizable.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] Since their figure and the scenery in a house were always conventionally displayed on the image display device 6 of the partner of a telephone like the above to a sudden telephone or the telephone from those who do not know, there was a problem that protection of privacy was becoming difficult. Moreover, when it was going to transmit information in written form, it wrote to the alphabetic character once, the activity time-consuming [of photoing it] was needed, and there was a problem of being user-unfriendly.

[0009] Then, it aims at offering TV telephone image display device which can improve the user-friendliness when transmitting and receiving text, such as an answering machine message, by this invention could choose the image data which transmits to a partner for protection of privacy in view of the above-mentioned problem in TV, a personal computer, etc. which have telephone carrier transmitter ability, and having prepared the alphabetic character input function.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram of TV telephone image display device concerning the gestalt of operation of the 1st of this invention.

[Drawing 2] The block diagram of TV telephone image display device concerning the gestalt of operation of the 2nd of this invention.

[Drawing 3] The flow chart explaining actuation of the image data selection in drawing 1 and drawing 2.

[Drawing 4] The flow chart explaining actuation of the answering machine function in drawing 2.

[Drawing 5] The block diagram of the conventional TV telephone image display device.

[Description of Notations]

- 1 -- TV Telephone Image Display Device
- 2 -- Image Decoding Equipment
- 3 -- Collating Unit
- 4 -- Registration Equipment
- 5 -- Individual Humanity News Input Unit
- 6 -- Image Display Device
- 7 -- Image Encoding Equipment
- 8 -- Image Selecting Arrangement
- 9 -- Image Storage
- 10 -- Image External Input Terminal
- 11 -- Image Photography Equipment
- 12 -- Alphabetic Character Image Transformation Equipment
- 13 -- Alphabetic Character Input Unit
- 14 -- Answering Machine Mode Input Terminal

[Translation done.]

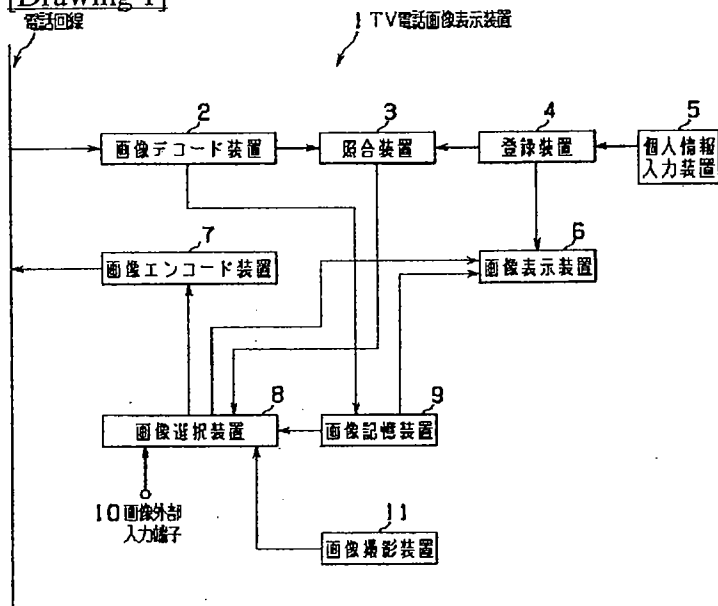
* NOTICES *

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

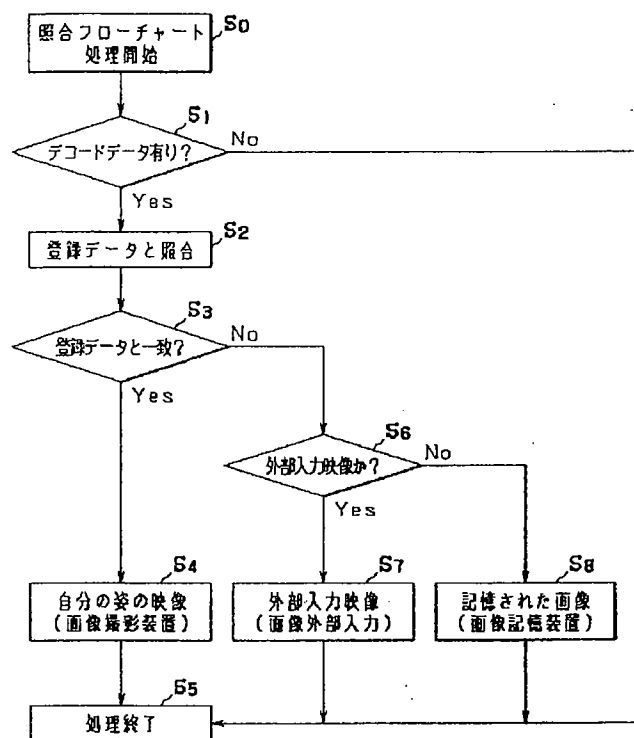
[Drawing 1]



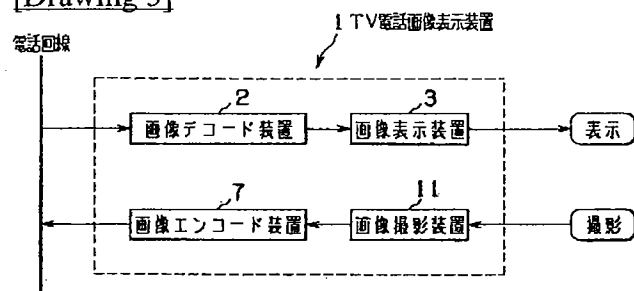
- 2: Image decoder
- 3: Collating unit
- 4: Register device
- 5: News input
- 6: Display
- 7: image Encoder
- 8: Image Selecting circuit
- 9: Image storage
- 10: Image External terminal
- 11: Camera

[Drawing 3]

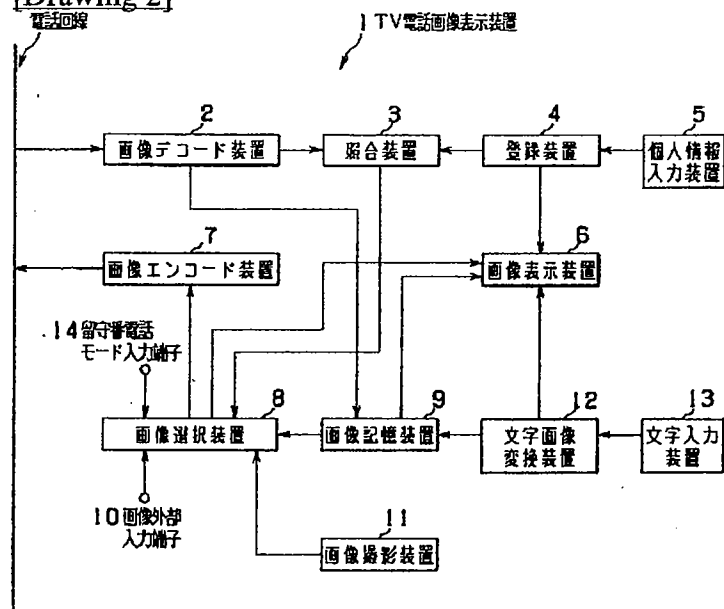
10: Connected to: TV, VTR, movie, Camera etc



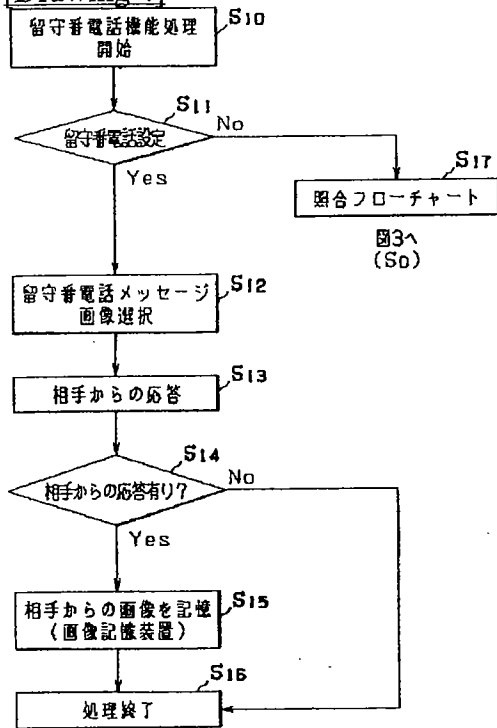
[Drawing 5]



[Drawing 2]



[Drawing 4]



[Translation done.]

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End of Result Set

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L2: Entry 1 of 1

File: JPAB

Jan 31, 2003

PUB-NO: JP02003032727A

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TITLE: DELIVERY SYSTEM, ITS SERVER, STORAGE, PORTABLE TERMINAL SYSTEM, AND PROGRAM

PUBN-DATE: January 31, 2003

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COUNTRY

BANDAI CO LTD

APPL-NO: JP2001213701

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INT-CL (IPC): H04 Q 7/32; H04 M 1/00; H04 M 11/08; H04 Q 7/20; H04 Q 7/38

ABSTRACT:

PROBLEM TO BE SOLVED: To express one character visually and/or aurally, by interlocking a character given to a portable terminal or a storage and contents related to the character downloaded from a server.

SOLUTION: This device has a portable terminal 1a which has an image display means, a means for requesting the download of an image data; and an image control means for displaying the downloaded image data a storage 1b which is given the shape of a character and stores the portable terminal; and a server which has a storage means having stored the image data of the image corresponding to the character given to the storage, and an image delivering means for delivering the image data to the portable terminal in answer to the request of download from the portable telephone. The form of the character and the image of a part of the character displayed on the display of the portable terminal are united to form one character, by displaying the image data downloaded by the storage device on the display of the portable terminal.

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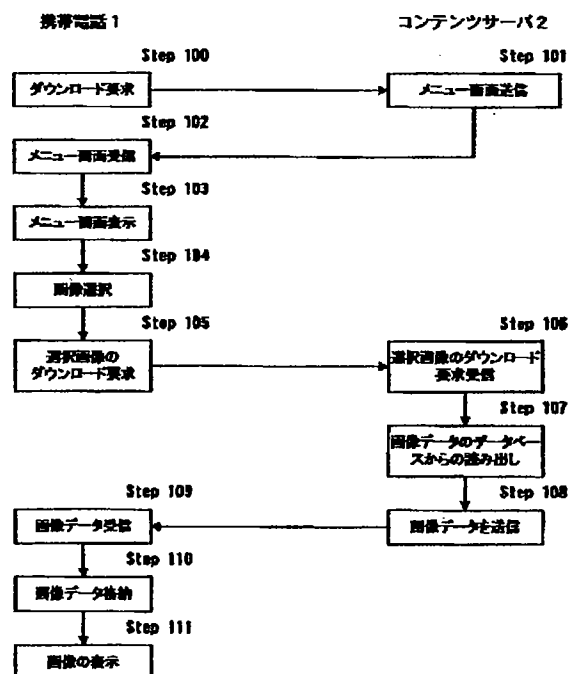
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(54) 【発明の名称】 配信システム、そのサーバ及び収容装置と、携帯端末システムと、プログラム

(57) 【要約】 (修正有)

【課題】 携帯端末又は収容装置に施されたキャラクタと、サーバからダウンロードされるキャラクタに関連するコンテンツとを連動させて、一つのキャラクタを視覚的又/及び聴覚的に表現すること。

【解決手段】 画像表示手段と、画像データのダウンロードを要求する手段と、ダウンロードされた画像データを画像を表示させる画像制御手段とを有する携帯端末1aと、キャラクタの形状が施され携帯端末を収納する収容装置1bと、収容装置に施されたキャラクタに対応する画像の画像データが格納された記憶手段と、携帯端末からダウンロード要求に回答し携帯端末に画像データを配信する画像配信手段とを有するサーバとを有する。収容装置よりダウンロードされた画像データを携帯端末の表示部に表示させることにより、キャラクタの形状と携帯端末の表示部に表示されるキャラクタの一部の画像とが一体となって一つのキャラクタを形成する。



【特許請求の範囲】

【請求項1】 配信システムであって、

画像を表示する表示手段と、画像データのダウンロードを要求する手段と、ダウンロードされた画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有する携帯端末と、

キャラクターの形状が施され、前記携帯端末を収納した状態で前記携帯端末の表示手段に表示された画像が視認可能な収容装置と、

前記収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求にตอบสนองして、前記携帯端末に画像データを配信する画像配信手段とを有するコンテンツサーバとを有し、

前記収容装置に前記携帯端末が収容された状態でダウンロードされた画像データの画像を前記携帯端末の表示部に表示させることにより、前記収容装置に施されたキャラクターの形状と、前記携帯端末の表示部に表示されるキャラクターの一部の画像とが一体となって一つのキャラクターを形成することを特徴とする配信システム。

【請求項2】 前記コンテンツサーバは、前記収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求にตอบสนองして、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有し、

前記携帯端末は、メロディを出力する出力手段と、メロディデータのダウンロードを要求する手段と、ダウンロードされたメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする請求項1に記載の配信システム。

【請求項3】 前記コンテンツサーバは、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求にตอบสนองして、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段とを有し、

前記携帯端末は、複数の画像データと、これに対応したメロディデータのダウンロードをサーバに要求する手段と、前記ダウンロードした複数の画像データ及びこれに対応したメロディデータが携帯端末の通信状況を示す情報に対応して格納される記憶手段と、

携帯端末の通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段とを有することを特徴とする請求項1又

は請求項2に記載の配信システム。

【請求項4】 携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況であり、サーバに格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況に対応したものであることを特徴とする請求項3に記載の配信システム。

【請求項5】 携帯端末システムであって、携帯端末とこの携帯端末を収容する収容装置とを有し、前記収容装置は、キャラクターの形状が施され、前記携帯端末を収納した状態で前記携帯端末に表示された画像が視認可能であり、

前記携帯端末は、画像を表示する表示手段と、前記収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、前記記憶手段に格納された画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有することを特徴とする携帯端末システム。

【請求項6】 前記携帯端末は、前記収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、

メロディを出力する出力手段と、前記記憶手段に格納されているメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする請求項5に記載の携帯端末システム。

【請求項7】 前記携帯端末は、携帯端末の通信状況に応じて、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが通信状況を示す情報に対応して格納された記憶手段と、通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段とを有することを特徴とする請求項5又は請求項6に記載の携帯端末システム。

【請求項8】 携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況であり、記憶手段に格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況に対応したものであることを特徴とする請求項7に記載の携帯端末システム。

【請求項9】 前記収容装置は、キャラクター背面側の形状が施された第1のカバーと、前記キャラクターの正面側の形状が施され、かつ、前記携帯端末の表示部に表示される画像が視認可能な開口部又は透明部が少なくとも設けられた第2カバーとを有し、

前記第1のカバーと第2のカバーとが嵌装されて携帯端末が収納されることを特徴とする請求項1から請求項8のいずれかに記載の配信システム又は携帯端末システム。

【請求項10】 前記第2カバーには、携帯端末の操作に必要な孔が設けられていることを特徴とする請求項9に記載の配信システム又は携帯端末システム。

【請求項11】 前記第1のカバーと前記第2のカバーとが透明な材質で成形され、前記カバーの内側から塗装可能に構成されていることを特徴とする請求項10に記載の配信システム又は携帯端末システム。

【請求項12】 前記第1のカバー、又は前記第2のカバーの内側に、塗り分け用のモールが形成されていることを特徴とする請求項11に記載の配信システム又は携帯端末システム。

【請求項13】 配信システムであって、キャラクターの形状が施された筐体と、画像を表示する表示手段と、画像データのダウンロードを要求する手段と、ダウンロードされた画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有する携帯

端末と、前記携帯端末の筐体に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求にตอบสนองして、前記携帯端末に画像データを配信する画像配信手段とを有するコンテンツサーバとを有し、ダウンロードされた画像データの画像を前記携帯端末の表示部に表示させることにより、前記携帯端末の筐体に施されたキャラクターの形状と、前記携帯端末の表示部に表示されるキャラクターの一部の画像とが一体となって一つのキャラクターを形成することを特徴とする配信システム。

【請求項14】 前記コンテンツサーバは、前記携帯端末の筐体に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求にตอบสนองして、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有し、

前記携帯端末は、メロディを出力する出力手段と、メロディデータのダウンロードを要求する手段と、ダウンロードされたメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする請求項13に記載の配信システム。

【請求項15】 携帯端末であって、キャラクターの形状が施された筐体と、画像を表示する表示手段と、前記キャラクターの一部に対応する画像の画像データが格納された記憶手段と、

前記記憶手段に格納された画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有するこ

とを特徴とする携帯端末。

【請求項16】 前記携帯端末は、前記キャラクターに関連するメロディのメロディデータが格納された記憶手段と、メロディを出力する出力手段と、前記記憶手段に格納されているメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする請求項15に記載の携帯端末。

【請求項17】 前記携帯端末は、キャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが通信状況を示す情報に対応して格納された記憶手段と、携帯端末の通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段とを有することを特徴とする請求項15又は請求項16に記載の携帯端末。

【請求項18】 携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況であり、記憶手段に格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況に対応したものであることを特徴とする請求項17に記載の携帯端末。

【請求項19】 キャラクターの形状が施された収容装置に収容される携帯端末に、画像を配信するサーバであって、

収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求にตอบสนองして、前記携帯端末に画像データを配信する画像配信手段とを有することを特徴とするサーバ。

【請求項20】 前記サーバは、収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有することを特徴とする請求項19に記載のサーバ。

【請求項21】 前記サーバは、携帯端末の通信状況に応じて、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求にตอบสนองして、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段とを更に有することを特徴とする請求項19又は請求項

20に記載のサーバ。

【請求項22】 キャラクターの形状の携帯端末に、画像を配信するサーバであって、前記携帯端末に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段とを有することを特徴とするサーバ。

【請求項23】 前記サーバは、前記携帯端末に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有することを特徴とする請求項22に記載のサーバ。

【請求項24】 キャラクターの形状が施された収容装置に収容される携帯端末に、画像を配信するサーバの為のプログラムであって、前記プログラムは前記サーバを、収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段として機能させること特徴とするプログラム。

【請求項25】 前記プログラムは、サーバを、前記収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段として更に機能させることを特徴とする請求項24に記載のプログラム。

【請求項26】 前記プログラムは、サーバを、携帯端末の通信状況に応じて、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求に応答して、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段として更に機能させることを特徴とする請求項24又は請求項25に記載のプログラム。

【請求項27】 キャラクターの形状の携帯端末に、画像を配信するサーバの為のプログラムであって、前記プログラムは前記サーバを、前記携帯端末に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段として機能させることを特徴とするプログラム。

【請求項28】 前記プログラムは、

前記携帯端末に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段として更に機能させることを特徴とする請求項27に記載のプログラム。

【請求項29】 前記プログラムは、サーバを、携帯端末の通信状況に応じて、携帯端末に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求に応答して、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段として更に機能させることを特徴とする請求項27又は請求項28に記載のプログラム。

【請求項30】 キャラクター形状した携帯端末、又はキャラクター形状をした収容装置に収容された携帯端末のプログラムであって、前記プログラムは前記携帯端末を、携帯端末の通信状況に応じて、キャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが通信状況を示す情報に対応して格納された記憶手段と、画像を表示する表示手段と、メロディを出力する出力手段と、通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段として機能させること特徴とするプログラム。

【請求項31】 携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況であり、記憶手段に格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況に対応したものであることを特徴とする請求項30に記載のプログラム。

【請求項32】 コンテンツサーバから所定のキャラクターの一部の画像をダウンロードし、その画像を表示する携帯端末が収容される収容装置であって、前記ダウンロードされる画像に対応するキャラクターの形状が施され、少なくとも携帯端末の表示部が視認可能な開口部又は透明部が設けられたことを特徴とする収容装置。

【請求項33】 前記収容装置は、キャラクター背面側の形状が施された第1のカバーと、前記キャラクターの正面側の形状が施され、かつ、前記携帯端末の表示部に表示される画像が視認可能な開口部又は透明部が少なくとも設けられた第2カバーとを有し、

50 前記第1のカバーと第2のカバーとが嵌装されて携帯端

末が収納されることを特徴とする請求項32に記載の収容装置。

【請求項34】 前記第2カバーには、携帯端末の操作に必要な孔が設けられていることを特徴とする請求項33に記載の収容装置。

【請求項35】 前記第1のカバーと前記第2のカバーとが透明な材質で成形され、前記カバーの内側から塗装可能に構成されていることを特徴とする請求項34に記載の収容装置。

【請求項36】 前記第1のカバー、又は前記第2のカバーの内側に、塗り分け用のモールが形成されていることを特徴とする請求項35に記載の収容装置。

【発明の詳細な説明】

【0001】

【発明が属する技術分野】本発明は配信システムに関し、特に、携帯端末を収容する収容装置と携帯端末にダウンロードされるコンテンツとが連動した配信システムと、それに用いられるサーバ、収容装置、又は携帯端末システムと、プログラムに関する。

【0002】

【従来の技術】近年、iモードに代表されるように、近年の携帯電話のサービスは、従来の設置型の電話のように単なる通話サービスのみならず、コンテンツサーバからコンテンツ、例えば待ち受け画面、着信メロディやゲーム等を携帯電話に配信するサービスが盛んに行われている。

【0003】一方で、携帯電話を塗装したり、携帯電話を装飾が施された収容装置（例えば、ケース）に収容したりと、個人の趣向に合わせて携帯電話自体にオリジナリティを持たせることも行われている。

【0004】

【発明が解決しようとする課題】しかしながら、コンテンツサーバからダウンロードしたコンテンツと、携帯電話の容姿とが連動して、視覚的、又は聴覚的に楽しめるような技術はなかった。

【0005】そこで、本発明は上記問題点に鑑みて発明されたものであって、その目的は携帯端末の容姿とコンテンツサーバからダウンロード、又は予めプリインストールされたコンテンツとが連動して、一つのコンテンツとして楽しめる技術を提供することにある。

【0006】また、本発明の目的は、携帯端末又はこれを収容する収容装置に施されたキャラクターと、サーバからダウンロード、又は予めプリインストールされた、キャラクターに関連するコンテンツとを連動させて、一つのキャラクターを視覚的又/及び聴覚的に表現する技術を提供することにある。

【0007】

【課題を解決するための手段】上記目的を達成する第1の発明は、配信システムであって、画像を表示する表示手段と、画像データのダウンロードを要求する手段と、

ダウンロードされた画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有する携帯端末と、キャラクターの形状が施され、前記携帯端末を収納した状態で前記携帯端末の表示手段に表示された画像が視認可能な収容装置と、前記収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求にตอบสนองして、前記携帯端末に画像データを配信する画像配信手段とを有するコンテンツサーバとを有し、前記収容装置に前記携帯端末が収容された状態でダウンロードされた画像データの画像を前記携帯端末の表示部に表示させることにより、前記収容装置に施されたキャラクターの形状と、前記携帯端末の表示部に表示されるキャラクターの一部の画像とが一体となって一つのキャラクターを形成することを特徴とする。

【0008】上記目的を達成する第2の発明は、上記第1の発明において、前記コンテンツサーバは、前記収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求にตอบสนองして、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有し、前記携帯端末は、メロディを出力する出力手段と、メロディデータのダウンロードを要求する手段と、ダウンロードされたメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする。

【0009】上記目的を達成する第3の発明は、上記第1又は第2の発明において、前記コンテンツサーバは、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求にตอบสนองして、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段とを有し、前記携帯端末は、複数の画像データと、これに対応したメロディデータのダウンロードをサーバに要求する手段と、前記ダウンロードした複数の画像データ及びこれに対応したメロディデータが携帯端末の通信状況を示す情報に対応して格納される記憶手段と、携帯端末の通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段とを有することを特徴とする。

【0010】上記目的を達成する第4の発明は、上記第3の発明において、携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況であり、サーバに格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況に対応したものであることを特徴と

する。

【0011】上記目的を達成する第5の発明は、携帯端末システムであって、携帯端末とこの携帯端末を収容する収容装置とを有し、前記収容装置は、キャラクターの形状が施され、前記携帯端末を収納した状態で前記携帯端末に表示された画像が視認可能であり、前記携帯端末は、画像を表示する表示手段と、前記収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、前記記憶手段に格納された画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有することを特徴とする。

【0012】上記目的を達成する第6の発明は、上記第5の発明において、前記携帯端末は、前記収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、メロディを出力する出力手段と、前記記憶手段に格納されているメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする。

【0013】上記目的を達成する第7の発明は、上記第5又は第6の発明において、前記携帯端末は、携帯端末の通信状況に応じて、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが通信状況を示す情報に対応して格納された記憶手段と、通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段とを有することを特徴とする。

【0014】上記目的を達成する第8の発明は、上記第7の発明において、携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況であり、記憶手段に格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及びは電子メールの着信状況に対応したものであることを特徴とする。

【0015】上記目的を達成する第9の発明は、上記第1から第8のいずれかの発明において、前記収容装置は、キャラクター背面側の形状が施された第1のカバーと、前記キャラクターの正面側の形状が施され、かつ、前記携帯端末の表示部に表示される画像が視認可能な開口部又は透明部が少なくとも設けられた第2カバーとを有し、前記第1のカバーと第2のカバーとが嵌装されて携帯端末が収納されることを特徴とする。

【0016】上記目的を達成する第10の発明は、上記第9の発明において、前記第2カバーには、携帯端末の操作に必要な孔が設けられていることを特徴とする。

【0017】上記目的を達成する第11の発明は、上記第10の発明において、前記第1のカバーと前記第2のカバーとが透明な材質で成形され、前記カバーの内側か

ら塗装可能に構成されていることを特徴とする。

【0018】上記目的を達成する第12の発明は、上記第11の発明において、前記第1のカバー、又は前記第2のカバーの内側に、塗り分け用のモールが形成されていることを特徴とする。

【0019】上記目的を達成する第13の発明は、配信システムであって、キャラクターの形状が施された筐体と、画像を表示する表示手段と、画像データのダウンロードを要求する手段と、ダウンロードされた画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有する携帯端末と、前記携帯端末の筐体に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に回答して、前記携帯端末に画像データを配信する画像配信手段とを有するコンテンツサーバとを有し、ダウンロードされた画像データの画像を前記携帯端末の表示部に表示させることにより、前記携帯端末の筐体に施されたキャラクターの形状と、前記携帯端末の表示部に表示されるキャラクターの一部の画像とが一体となって一つのキャラクターを形成することを特徴とする。

【0020】上記目的を達成する第14の発明は、上記第13の発明において、前記コンテンツサーバは、前記携帯端末の筐体に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求に回答して、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有し、前記携帯端末は、メロディを出力する出力手段と、メロディデータのダウンロードを要求する手段と、ダウンロードされたメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする。

【0021】上記目的を達成する第15の発明は、携帯端末であって、キャラクターの形状が施された筐体と、画像を表示する表示手段と、前記キャラクターの一部に対応する画像の画像データが格納された記憶手段と、前記記憶手段に格納された画像データに基づいて、前記表示手段に画像を表示させる画像制御手段とを有することを特徴とする。

【0022】上記目的を達成する第16の発明は、上記第15の発明において、前記携帯端末は、前記キャラクターに関連するメロディのメロディデータが格納された記憶手段と、メロディを出力する出力手段と、前記記憶手段に格納されているメロディデータに基づいて、前記出力手段にメロディを出力させるメロディ制御手段とを更に有することを特徴とする。

【0023】上記目的を達成する第17の発明は、上記第15又は第16の発明において、前記携帯端末は、キャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータと

が通信状況を示す情報に対応して格納された記憶手段と、携帯端末の通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段とを有することを特徴とする。

【0024】上記目的を達成する第18の発明は、上記第17の発明において、携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及び電子メールの着信状況であり、記憶手段に格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及び電子メールの着信状況に対応したものであることを特徴とする。

【0025】上記目的を達成する第19の発明は、キャラクターの形状が施された収容装置に収容される携帯端末に、画像を配信するサーバであって、収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段とを有することを特徴とする。

【0026】上記目的を達成する第20の発明は、上記第19の発明において、前記サーバは、収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有することを特徴とする。

【0027】上記目的を達成する第21の発明は、上記第19又は第20の発明において、前記サーバは、携帯端末の通信状況に応じて、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求に応答して、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段とを更に有することを特徴とする。

【0028】上記目的を達成する第22の発明は、キャラクターの形状の携帯端末に、画像を配信するサーバであって、前記携帯端末に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段とを有することを特徴とする。

【0029】上記目的を達成する第23の発明は、上記第22の発明において、前記サーバは、前記携帯端末に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段とを更に有することを特徴とする。

【0030】上記目的を達成する第24の発明は、キャラクターの形状が施された収容装置に収容される携帯端末に、画像を配信するサーバの為のプログラムであって、前記プログラムは前記サーバを、収容装置に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段として機能させることを特徴とする。

【0031】上記目的を達成する第25の発明は、上記第24の発明において、前記プログラムは、サーバを、前記収容装置に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段として更に機能させることを特徴とする。

【0032】上記目的を達成する第26の発明は、上記第24又は第25の発明において、前記プログラムは、サーバを、携帯端末の通信状況に応じて、収容装置に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求に応答して、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段として更に機能させることを特徴とする。

【0033】上記目的を達成する第27の発明は、キャラクターの形状の携帯端末に、画像を配信するサーバの為のプログラムであって、前記プログラムは前記サーバを、前記携帯端末に施されたキャラクターの一部に対応する画像の画像データが格納された記憶手段と、携帯端末から画像データのダウンロードの要求に応答して、前記携帯端末に画像データを配信する画像配信手段として機能させることを特徴とする。

【0034】上記目的を達成する第28の発明は、上記第27の発明において、前記プログラムは、前記携帯端末に施されたキャラクターに関連するメロディのメロディデータが格納された記憶手段と、携帯端末からメロディデータのダウンロードの要求があると、前記携帯端末にメロディデータを配信するメロディデータ配信手段として更に機能させることを特徴とする。

【0035】上記目的を達成する第29の発明は、上記第27又は第28の発明において、前記プログラムは、サーバを、携帯端末の通信状況に応じて、携帯端末に施されたキャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、携帯端末から各画像データとこれに対応したメロディデータのダウンロードの要求に応答して、前記携帯端末に画像データ及びメロディデータを配信する画像配信手段として更に機能させる

ことを特徴とする。

【0036】上記目的を達成する第30の発明は、キャラクター形状した携帯端末、又はキャラクター形状をした収容装置に収容された携帯端末のプログラムであって、前記プログラムは前記携帯端末を、携帯端末の通信状況に応じて、前記キャラクターの一部に対応した複数の画像の画像データと、前記各画像に対応したメロディのメロディデータとが格納された記憶手段と、画像を表示する表示手段と、メロディを出力する出力手段と、通信状況を判断し、これに対応した画像の画像データを前記記憶手段から読み出して表示手段に表示させるとともに、表示される画像に対応するメロディデータを前記記憶手段から読み出して出力手段にメロディを出力させる手段として機能させること特徴とする。

【0037】上記目的を達成する第31の発明は、上記第30の発明において、携帯端末の通信状況が、呼の待ち受け状況、呼の着信状況及び電子メールの着信状況であり、記憶手段に格納されている画像データ及びメロディデータが、前記呼の待ち受け状況、呼の着信状況及び電子メールの着信状況に対応したものであることを特徴とする。

【0038】上記目的を達成する第32の発明は、コンテンツサーバから所定のキャラクターの一部の画像をダウンロードし、その画像を表示する携帯端末が収容される収容装置であって、前記ダウンロードされる画像に対応するキャラクターの形状が施され、少なくとも携帯端末の表示部が視認可能な開口部又は透明部が設けられたことを特徴とする。

【0039】上記目的を達成する第33の発明は、上記第32の発明において、前記収容装置は、キャラクター背面側の形状が施された第1のカバーと、前記キャラクターの正面側の形状が施され、かつ、前記携帯端末の表示部に表示される画像が視認可能な開口部又は透明部が少なくとも設けられた第2カバーとを有し、前記第1のカバーと第2のカバーとが嵌装されて携帯端末が収納されることを特徴とする。

【0040】上記目的を達成する第34の発明は、上記第33の発明において、前記第2カバーには、携帯端末の操作に必要な孔が設けられていることを特徴とする。

【0041】上記目的を達成する第35の発明は、上記第34の発明において、前記第1のカバーと前記第2のカバーとが透明な材質で成形され、前記カバーの内側から塗装可能に構成されていることを特徴とする。

【0042】上記目的を達成する第36の発明は、上記第35発明において、前記第1のカバー、又は前記第2のカバーの内側に、塗り分け用のモールが形成されていることを特徴とする。

【0043】

【発明の実施の形態】本発明の第1の実施の形態を説明する。尚、本実施の形態では、携帯端末の例として、代

表的な携帯電話を例にして説明するが、本発明は携帯電話に限定されることなく、例えばPDAのような携帯端末であっても良い。

【0044】図1は第1の実施の形態の概念図である。

【0045】図1中、1は携帯電話であり、2はコンテンツを提供するコンテンツサーバ、3はゲートウェイサーバであり、4は基地局であり、5はゲートウェイサーバ3側の固定通信網であり、6はゲートウェイサーバ3とコンテンツサーバ2とを結ぶ通信網（インターネット）であり、7は移動体通信網である。

【0046】次に、携帯電話1とコンテンツサーバ2について詳細に説明する。尚、ゲートウェイサーバ3、基地局4、固定通信網5、通信網6及び移動体通信網7は、既知の技術なので詳細な説明を省略する。

【0047】携帯電話1について説明する。

【0048】携帯電話1は、図2に示される如く、携帯電話本体1aと、携帯電話本体1aを収容する収容装置1b（携帯電話カバー）とから成る。

【0049】まず、携帯電話本体1aについて説明する。

【0050】図3は携帯電話本体1aのブロック図である。

【0051】図3中、11はデータを送受信する為の送受信部である。

【0052】12はデータが記憶される記憶部である。

【0053】13はダウンロード制御部である。このダウンロード制御部13は、コンテンツサーバ2に画像データのダウンロードを要求から、ダウンロードされた画像データの記憶部12への格納処理等までの処理を行うものである。

【0054】14は画像が表示されるディスプレイである。

【0055】15は画像制御部である。この画像制御部15は、記憶部12に格納されている画像データを読み出し、読み出したデータに基づいて、ディスプレイ11に画像を表示する。

【0056】16はテンキーなどの操作部である。

【0057】次に、収容装置1b（携帯電話カバー）について説明する。

【0058】図4は収容装置1bを説明する為の図である。

【0059】収容装置1bは、第1のカバー20と第2のカバー21とから成り、その形状を説明すると、後述するように携帯電話本体1aのディスプレイ11にキャラクターの一部の画像が表示されるので、ディスプレイ11で表示されるキャラクターの画像と、第1のカバー20と第2のカバー21とに施されたキャラクターの形状とで、一つのキャラクターを表現できるよう、第1のカバー20と第2のカバー21とにキャラクターの形状が施される。例えば、ディスプレイ11に表示される画

像が、あるキャラクターの顔の部分の画像であるならば、収容装置1bの形状はキャラクターの顔以外の部分の形状が施される。

【0060】第1のカバー20は、あるキャラクター（例えば、犬）の正面側の形状が形成されており、さらに、第1のカバー20には、アンテナ孔や、送受話に必要な孔及びディスプレイ11が視認可能な開口部22が設けられている。尚、本実施の形態では、ディスプレイ11に表示される画像が視認可能なように開口部としたが、これに限定されることなくディスプレイ11に対応する位置を視認可能に透明にしても良い。第2のカバー21は、前記キャラクター（例えば、犬）の背面側の形状が形成されている。そして、図5に示される如く、第1のカバー20の凹部23に、第2のカバー21の凸部24を嵌装し、携帯電話本体1aの全体を収容・カバーし、第1のカバー20と第2のカバー21とが嵌装された状態で一つのキャラクターが構成される。

【0061】第1のカバー20と、第2のカバー21とは、着色性と電気特性のよいプラスチック製が好ましく、例えば、透明ABS樹脂等が考えられる。

【0062】本実施の形態では、第1のカバー20と第2のカバー21とは、透明ABS樹脂で成形され、ユーザが好みの色で着色できるように構成されている。塗装は、塗装面の保護のため、第1のカバー20と第2のカバー21ともに内側から塗装される。また、第1のカバー20と第2のカバー21との塗装面側（内側）にはモール25が形成され、ユーザが簡単、かつ綺麗に塗り分け塗装できるようになっている。

【0063】上記の如く、塗装された第1のカバー20と第2のカバー21とを、携帯電話本体1aを挟み込んだ状態で嵌装することにより、彩色されたキャラクター形状をした携帯電話1が構成される。

【0064】次に、コンテンツサーバ2について説明する。

【0065】図6はコンテンツサーバ2のブロック図である。

【0066】図6中、30はデータの送受信を行う送受信部である。

【0067】31は携帯電話1で表示される画像の画像データが格納された画像データベースである。この画像データベース31に格納されている画像データの画像は、携帯電話1で使用されているキャラクターに関連する画像であって、図7に示されるごとく、例えば、キャラクターの顔（笑顔や、泣き顔）、又はその一部の画像である。

【0068】画像データベース31には、図8に示す如く、キャラクター毎、例えば、“犬”、“猫”といったグループ毎にフォルダが設けられ、各フォルダにはそのキャラクターに関連する画像として、例えば、笑顔、泣き顔といった画像の画像データが格納されている。

【0069】32は画像配信部である。この画像配信部32は、携帯電話1からの画像ダウンロードの要求に応答して、メニュー画面を送信してメニュー画面から希望するキャラクターに対応する画像を選択させ、選択された画像の画像データを画像データベース31から読み出し、携帯電話1に画像を配信する。

【0070】次に、本実施の形態の動作を説明する。

【0071】図9は本実施の形態の動作を説明する動作フローチャートである。

【0072】まず、携帯電話1のダウンロード制御部13は、ゲートサーバ3を介して、コンテンツサーバ2に画像のダウンロード要求を行う（Step 100）。

【0073】ダウンロード要求を受信したコンテンツサーバ2では、画像配信部32がダウンロードの要求を行った携帯電話1にメニュー画面を送信する（Step 101）。

【0074】携帯電話1ではメニュー画面を受信し（Step 102）、ディスプレイ14にメニュー画面が表示される（Step 103）。携帯電話1のユーザは、メニュー画面に表示された現在ダウンロードが可能な画像のうち、自分が保有する収容装置1b（携帯電話カバー）のキャラクターに対応する画像を選択し（Step 104）、選択した画像のダウンロード要求を行う（Step 105）。

【0075】例えば、図10に示されるメニュー画面では、現在ダウンロードが可能な画像は、キャラクター“犬”の“笑顔”の画像、キャラクター“犬”の“泣き顔”の画像、キャラクター“猫”の“笑顔”の画像及びキャラクター“猫”の“泣き顔”の画像である。そして、携帯電話1のユーザが保有している収容装置1bのキャラクターは“犬”である。そこで、ユーザは、キャラクター“犬”の“笑顔”の画像を選択したとすると、携帯端末1のダウンロード制御部13は、ゲートサーバ3を介して、キャラクター“犬”の“笑顔”の画像のダウンロード要求を、コンテンツサーバ2に行う。

【0076】画像のダウンロード要求を受信したコンテンツサーバ2は、要求を受信し（Step 106）、要求された画像の画像データを画像データベース31から読み出す（Step 107）。そして、読み出した画像データを携帯電話1に送信する（Step 108）。

【0077】例えば、携帯電話1からの要求が、キャラクター“犬”の“笑い顔”の画像のダウンロード要求である場合には、画像データベース31からキャラクター“犬”の“笑い顔”の画像データが読み出され、携帯電話1に送信される。

【0078】携帯電話1では、ダウンロードされた画像を受信し（Step 109）、記憶部13に格納する（Step 110）。そして、画像制御部15により読み出され、ディスプレイ14に表示され、待ち受け画

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面等に用いられる (Step 111)。

【0079】図11は、携帯電話本体1aが収容装置1bに収容され、かつ、ダウンロードされたキャラクター“犬”の“笑顔”の画像がディスプレイ14に表示された状態を示すものである。

【0080】図11からも容易に理解できるように、ダウンロードされたキャラクター“犬”の“笑顔”の画像と、収容装置1bに施された形状とが一体となって、キャラクター（例えば、犬）が表現されているのが解る。

【0081】また、上述の例では“笑顔”の画像がディスプレイ14で表示されているが、キャラクターの“泣き顔”の画像をダウンロードして、ディスプレイ14に表示すれば、図12に示される如く、笑顔のキャラクターとは異なった泣き顔のキャラクターを表現することができる。

【0082】このように、本発明では、収容装置1bに施された形状と、ダウンロードされた画像とが一体となって、ひとつのキャラクターを表現することができ、携帯電話本体のディスプレイに表示する画像を変えれば、異なる状態のキャラクターを表現することができる。

【0083】尚、上述の実施例では、ユーザが好みに合わせて自由に塗装できるよう、収容装置1bを透明な材質としたが、予め着色が施されたもの、例えば多色成形で形成されたものであっても良い。また、収容装置1bの材質も、ABS樹脂に限らず、PVCのようなものであっても良い。

【0084】また、収容装置1bを用いず、携帯電話本体の形状をキャラクターのように形成しても良い。

【0085】更に、ダウンロードする画像も、キャラクターの顔に相当する画像に限らず、キャラクターによっては手や足の画像であっても良い。また、画像も静止画に限らず、例えば、笑顔から泣き顔に変化するような動画であっても良い。

【0086】第2の実施の形態を説明する。

【0087】第2の実施の形態は、上述した第1の実施の形態に加えて、収納装置1bのキャラクターに関連した着信メロディ（着信音）をコンテンツサーバ2に格納しておく。そして、着信メロディ1を携帯電話1にダウンロードし、着信音等に用いることにより、より一層キャラクターの特徴を表現することを特徴とする。

【0088】上記機能を達成する為、図13に示される如く、コンテンツサーバ2に着信音データベース50と、着信音を配信する着信音配信部51とを設ける。

【0089】また、図14に示される如く、携帯電話本体1aのダウンロード制御部13に、コンテンツサーバ2から着信音のデータをダウンロードして記憶部12に格納する機能を付加する。更に、携帯電話本体1aに、着信音を出力するスピーカ60と、着信時に記憶部12に格納されている着信音のデータを読み出し、スピーカ50に着信音を出力させる着信音制御部51とを設け

る。

【0090】次に、上述の構成における動作を説明する。

【0091】図15は第2の実施の形態の動作を示すフローチャートである。

【0092】まず、携帯端末1のダウンロード制御部13は、ゲートサーバ3を介して、コンテンツサーバ2に着信音のダウンロード要求を行う (Step 200)。

10 【0093】ダウンロード要求を受信したコンテンツサーバ2では、着信音配信部51がダウンロードの要求を行った携帯電話1にメニュー画面を送信する (Step 201)。

【0094】携帯電話1ではメニュー画面を受信し (Step 202)、ディスプレイ14にメニュー画面が表示される (Step 203)。携帯電話1のユーザは、メニュー画面に表示された現在ダウンロードが可能な着信音のうち、自分が保有する収容装置1b（携帯電話カバー）のキャラクターに対応する着信音を選択し (Step 204)、選択した着信音のダウンロード要求を行う (Step 205)。

20 【0095】例えば、図16に示されるメニュー画面では、現在ダウンロードが可能な着信音は、キャラクター“犬”の“鳴き声”の着信音と、キャラクター“猫”の“鳴き声”の着信音とである。そして、携帯電話1のユーザが保有している収容装置1bのキャラクターが、例えば“犬”である場合、ユーザは、キャラクター“犬”の“鳴き声”の着信音を選択する。すると、携帯電話1のダウンロード制御部13は、ゲートサーバ3を介して、キャラクター“犬”の“鳴き声”の着信音のデータのダウンロード要求を、コンテンツサーバ2に送信する。

【0096】着信音のダウンロード要求を受信したコンテンツサーバ2は、要求を受信し (Step 206)、要求された着信音のデータを着信音データベース50から読み出す (Step 107)。そして、読み出したデータを携帯電話1に送信する (Step 208)。

40 【0097】例えば、携帯電話1からの要求が、キャラクター“犬”の“鳴き声”のダウンロード要求である場合には、着信音データベース50からキャラクター“犬”の“鳴き声”のデータが読み出され、携帯電話1に送信される。

【0098】携帯電話1では、ダウンロードされた着信音のデータを受信し (Step 209)、着信音のデータが記憶部13に格納される (Step 210)。

50 【0099】そして、着信音制御部51は、他の携帯電話等からの呼の着信時があるかを判断し (Step 211)、着信がある場合には (Step 212)、着信音制御部51は、着信メロディのデータを記憶部13

から読み出す。そして、読み出された着信メロディのデータに基づいて、スピーカ50から着信メロディが出力される(Step 213)。

【0100】上記の第2の実施の形態によれば、キャラクターの顔又は一部の画像を待ち受け画面として表示時に、着信があった場合、着信音として、キャラクターに関連する着信音が出力されるので、収納装置1bに施されたキャラクターの形状と、表示されている画像とによる視覚的な効果に加え、着信音という聴覚的な効果を得られるので、よりリアルティにキャラクターを表現することができる。

【0101】例えば、第1の実施の形態で説明した如く、携帯電話本体が犬の形状が施された収容装置に収容され、かつ待ち受け画面に犬の笑顔が表示されている状態で、着信があった場合、着信音として、例えば“ワン、ワン”と出力されれば、より犬というキャラクターを表現することができる。

【0102】第3の実施の形態を説明する。

【0103】第3の実施の形態では、複数の画像とこれに対応したメロディとのデータを、コンテンツサーバ2に用意しておき、携帯電話1にダウンロードさせる。そして、携帯電話1では、ダウンロードした各画像及びメロディと、携帯電話の通信状況、例えば、呼の待ち受け状態や、呼の着信時、又はメール着信時といった、異なる通信状況とを対応付けて記憶させておき、それらの画像及びメロディを、通信状況に応じて切り替えて表示及び出力することを特徴とする。以下、具体的な実施の形態を説明する。尚、上述した実施の形態と同様なものについては、説明を省略する。

【0104】図17はコンテンツサーバ2のブロック図である。

【0105】図17中、61は携帯電話1で表示・出力される画像及びメロディのデータが格納された画像・メロディデータベースである。この画像・メロディデータベース61に格納されているデータは、携帯電話1で使われているキャラクターに関連する画像・メロディであって、携帯電話1の通信状況、ここでは呼の待ち受け時、呼の着信時及び電子メール着信時に使用される画像・メロディのデータが格納されている。画像・メロディデータベース61に格納されている画像・メロディのデータの具体例を図18に示す。図18によれば、キャラクター画像“笑顔”とメロディ“ワン、ワン”の組と、キャラクター画像“泣き顔”とメロディ“キャン、キャン”の組と、キャラクター画像“怒顔”とメロディ“ウーッ、ウーッ”の組とが格納されている。

【0106】62は画像・メロディ配信部である。この画像・メロディ配信部62は、携帯電話1からの画像・メロディのダウンロードの要求にตอบสนองして、上述した複数の画像・メロディのデータを携帯電話1に送信する。

【0107】次に、携帯電話本体1aについて説明す

る。

【0108】図19は携帯電話本体1aのブロック図である。

【0109】図19中、70は通信状況判断部である。この通信状況判断部70は、現在の携帯電話の通信状況、ここでは呼の待ち受け時と、呼の着信時と、電子メールの着信時とを判別するものである。

【0110】71はデータ格納部である。このデータ格納部71は、ダウンロードされたデータを、通信状況に対応させて記憶部12に格納するものである。格納方法であるが、ユーザの選択により、例えば、呼の待ち受け時にはキャラクター画像“泣き顔”とメロディ“キャン、キャン”の組と、呼の着信時にはキャラクター画像“笑顔”とメロディ“ワン、ワン”の組と、電子メールの着信時にはキャラクター画像“怒顔”とメロディ“ウーッ、ウーッ”の組というように、通信状況と画像・メロディデータとを対応付けて記憶手段12に格納する。

【0111】72は表示・出力制御部である。この表示・出力制御部72は、通信状況判断部70からの通信状況を受けて、この状況に対応した画像・メロディデータを記憶部12から読み出し、ディスプレイ14に画像を表示するとともに、スピーカ60からメロディを出力させる。但し、待ち受け時は画像の表示のみとする。

【0112】続いて、上述の構成における動作を説明する。尚、コンテンツサーバ2からの画像・メロディデータのダウンロードは、上述した実施の形態と同様なものなので説明を省略する。

【0113】図20は携帯電話1における動作のフローチャートである。

【0114】まず、携帯電話1は、コンテンツサーバ2から画像・メロディデータを受信し(Step 300)、データ格納部71により、受信した画像・メロディデータと、通信状況との対応付けが行われる(Step 301)。そして、通信状況の情報と画像・メロディデータとが対応付けられて記憶部12に格納される(Step 302)。

【0115】ここでは、呼の待ち受け時と、キャラクター画像“泣き顔”とメロディ“キャン、キャン”の組とが、呼の着信時と、キャラクター画像“笑顔”とメロディ“ワン、ワン”の組とが、電子メールの着信時と、キャラクター画像“怒顔”とメロディ“ウーッ、ウーッ”の組とが対応付けられて記憶手段12に格納されたものとする。

【0116】続いて、通信状況判断部70は、携帯電話1の現在の通信状況を判断し、表示・出力制御部72に通信状況を出力する(Step 303)。

【0117】表示・出力制御部72は、通信状況に対応した画像・メロディデータを記憶部12から読み出し(Step 304)、ディスプレイ14及びスピーカ60に出力して画像を表示し、メロディを出力する(S

tep 305)。

【0118】具体的に説明すると、呼の待ち受け時には、図21に示す如く、“泣き顔”の画像がディスプレイ14に表示される。そして、呼が着信すると、図22に示す如く、ディスプレイ14の画像が“笑顔”に切り替えられるとともに、スピーカ60からメロディ“ワン、ワン”が出力される。また、電子メールの着信には、図23に示す如く、ディスプレイ14には“怒顔”の画像が表示されるとともに、スピーカ60よりメロディ“ウーッ、ウーッ”が出力される。

【0119】このように、通信状況によって画像・メロディが変化し、より一層、収容装置のキャラクターとともに、視覚・聴覚的な変化を楽しむことができる。

【0120】尚、第1の実施の形態、第2の実施の形態及び第3の実施の形態で述べた動作と同様な動作をコンピュータ等の情報処理装置に行わせるプログラムにより、コンテンツサーバ2を動作させても良い。

【0121】また、第1の実施の形態、第2の実施の形態及び第3の実施の形態では、画像又はメロディをコンテンツサーバよりダウンロードして得たが、予め携帯電話本体に記憶させておいても（例えば、プリインストール）、携帯電話側では同様な効果が得られる。

【0122】

【発明の効果】本発明は、携帯端末を収容する収容装置をキャラクター形状とし、その収容装置に携帯端末を収容した状態で、サーバよりダウンロードしたキャラクターに関連する画像を携帯端末に表示することにより、収容装置に施されたキャラクターの形状と、ダウンロードされた画像とが一体となって、ひとつのキャラクターを表現することができる。

【0123】また、表示する画像を複数用意し、携帯電話本体のディスプレイに表示する画像を変えるようにすれば、異なる状態のキャラクターを表現することができる。

【0124】また、着信音を同様にサーバからダウンロード可能とし、ダウンロードされた着信音がキャラクターに関連する画像の表示時に出力されるので、収納装置に施されたキャラクターの形状と、表示されている画像とによる視覚的な効果に加え、着信音という聴覚的な効果を得られるので、よりリアルティにキャラクターを表現することができる。

【0125】さらに、複数の画像・メロディを用意し、携帯端末の通信状況によって画像・メロディが変化させるようにすれば、より一層、収容装置又は携帯端末に施されたキャラクターとともに、視覚・聴覚的な変化を楽しむことができる。

【図面の簡単な説明】

【図1】図1は本発明の実施の形態の概念図である。

【図2】図2は携帯電話1を説明する為の図である。

【図3】図3は携帯電話本体1aのブロック図である。

【図4】図4は収容装置1bを説明する為の図である。

【図5】図5は収容装置1bを説明する為の図である。

【図6】図6はコンテンツサーバ2のブロック図である。

【図7】図7は格納されている画像の一例を示す図である。

【図8】図8は画像データベース31を説明する為の図である。

【図9】図9は本実施の形態の動作を説明する動作フローチャートである。

【図10】図10はメニュー画面の表示例を示す図である。

【図11】図11は、携帯電話本体1aが収容装置1bに収容され、かつ、ダウンロードされたキャラクター“犬”の“笑顔”の画像がディスプレイ14に表示された状態を説明する図である。

【図12】図12は、携帯電話本体1aが収容装置1bに収容され、かつ、ダウンロードされたキャラクター“犬”の“泣き顔”の画像がディスプレイ14に表示された状態を説明する図である。

【図13】図13は第2の実施の形態におけるコンテンツサーバ2のブロック図である。

【図14】図14は第2の実施の形態における携帯電話本体1aのブロック図である。

【図15】図15は第2の実施の形態の動作を示すフローチャートである。

【図16】図16は第2の実施の形態におけるメニュー画面を説明する為の図である。

【図17】図17は第3の実施の形態におけるコンテンツサーバ2のブロック図である。

【図18】図18は画像・メロディデータを説明する為の図である。

【図19】図19は第3の実施の形態における携帯電話本体1aのブロック図である。

【図20】図20は第3の実施の形態における携帯電話1における動作のフローチャートである。

【図21】図21は第3の実施の形態における携帯電話1の表示・出力状態を説明する図である。

【図22】図22は第3の実施の形態における携帯電話1の表示・出力状態を説明する図である。

【図23】図23は第3の実施の形態における携帯電話1の表示・出力状態を説明する図である。

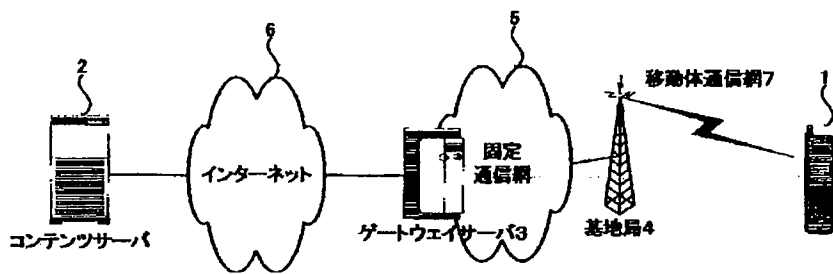
【符号の説明】

| | |
|----|-----------|
| 1 | 携帯電話 |
| 1a | 携帯電話本体 |
| 1b | 収容装置 |
| 2 | コンテンツサーバ |
| 3 | ゲートウェイサーバ |
| 4 | 基地局 |
| 5 | 固定通信網 |

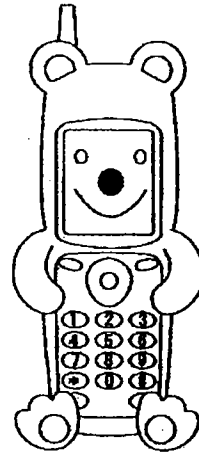
23
6 通信網 (インターネット)

24
7 移動体通信網

【図1】

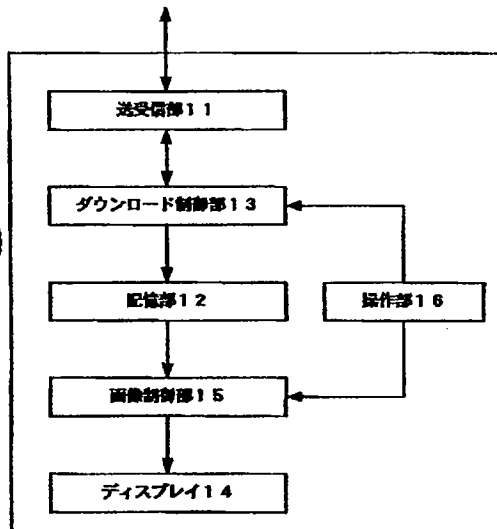
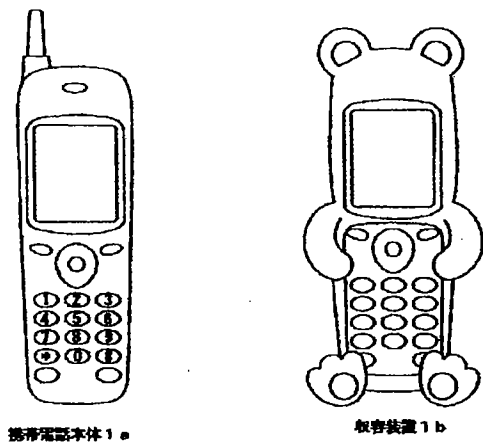


【図11】



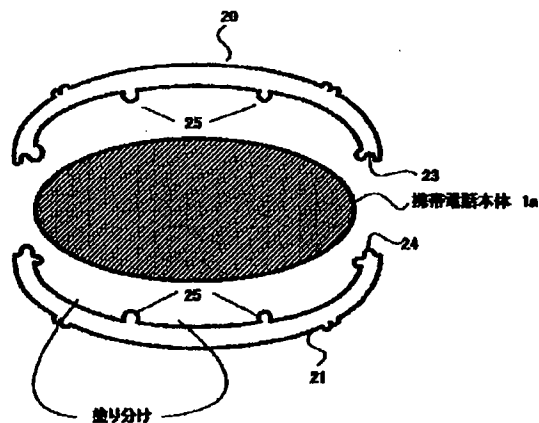
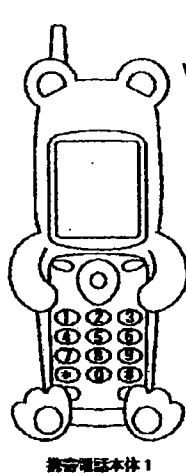
【図2】

【図3】

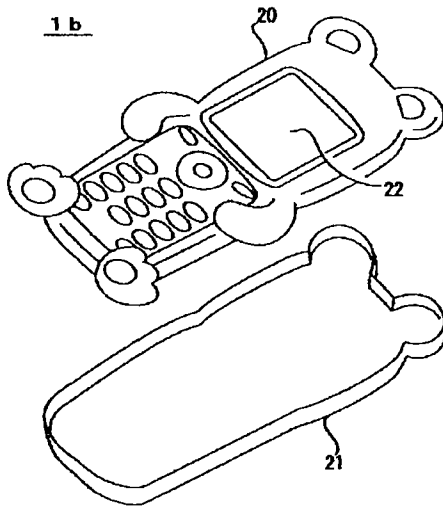


携帯電話本体 1
笑い顔

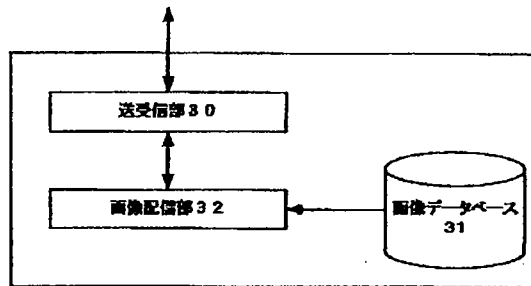
【図5】



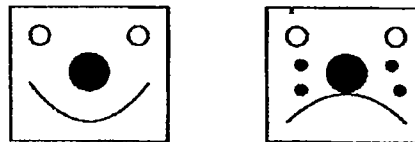
【図4】



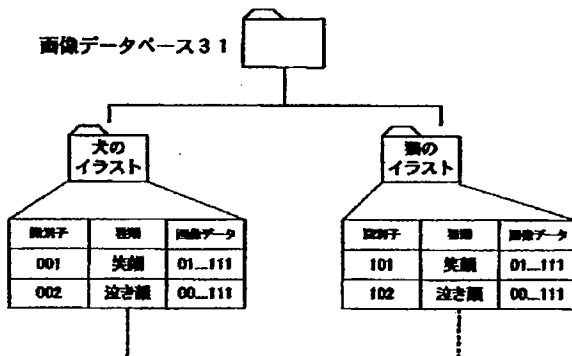
【図6】



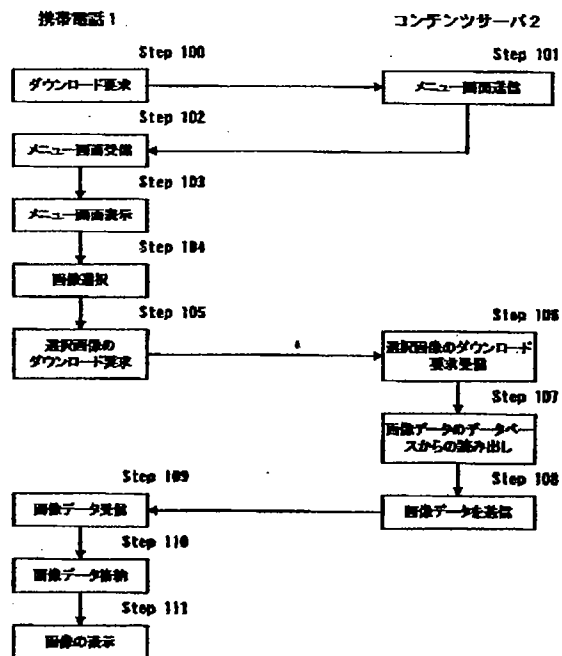
【図8】



【図7】



【図9】



【図10】

メニュー画面

現在ダウンロード可能な画像の一覧です。
ダウンロードする画像のボックスにチェックをしてください。

キャラクター"犬"

☐ 笑顔

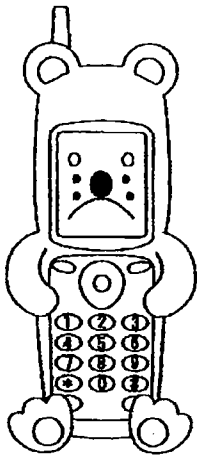
☐ 泣き顔

キャラクター"猫"

☐ 笑顔

☐ 泣き顔

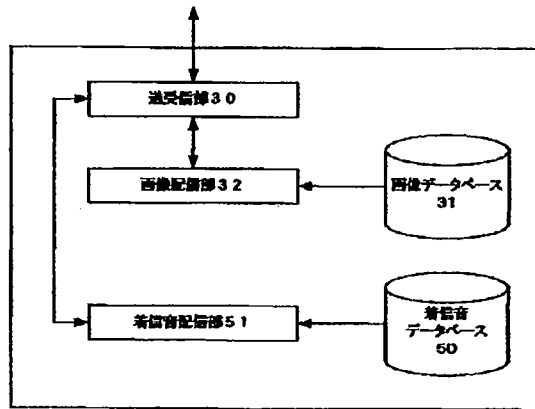
【図12】



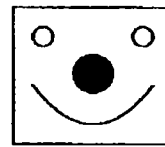
携帯電話本体 1

泣き顔

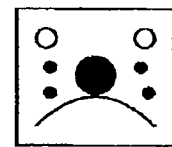
【図13】



【図18】



メロディワン、ワン

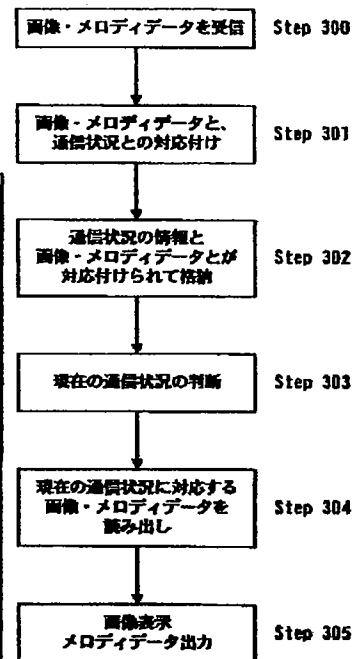


メロディキャン、キャン

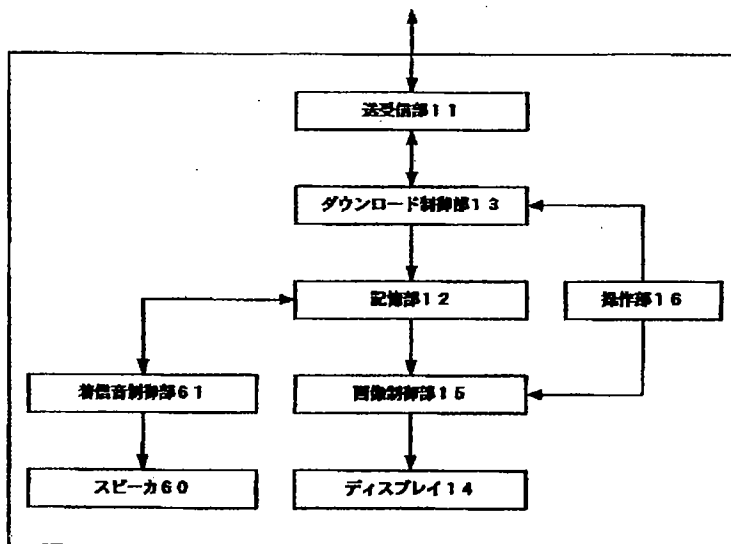


メロディウー、ウー

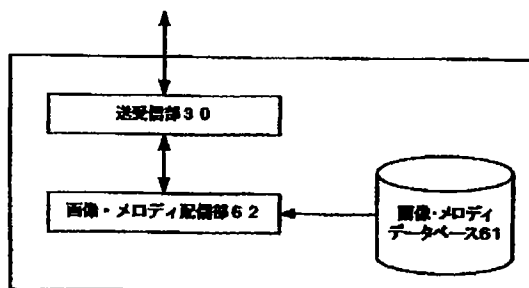
【図20】



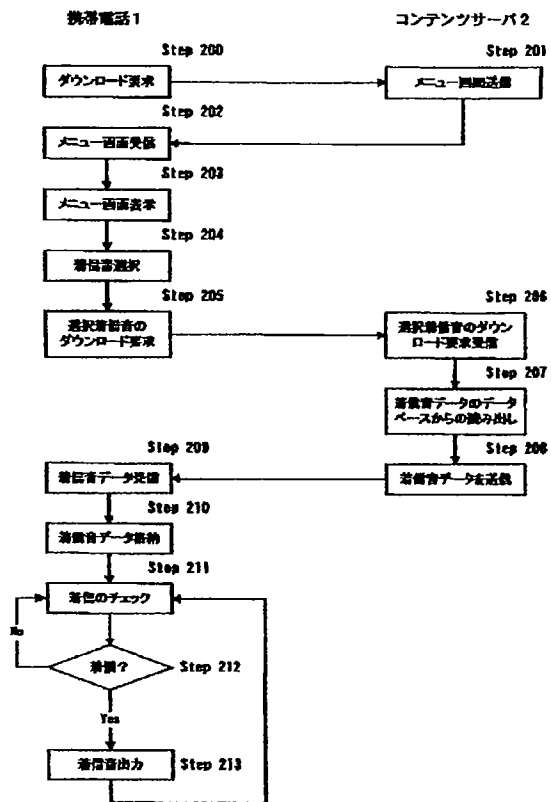
【図14】



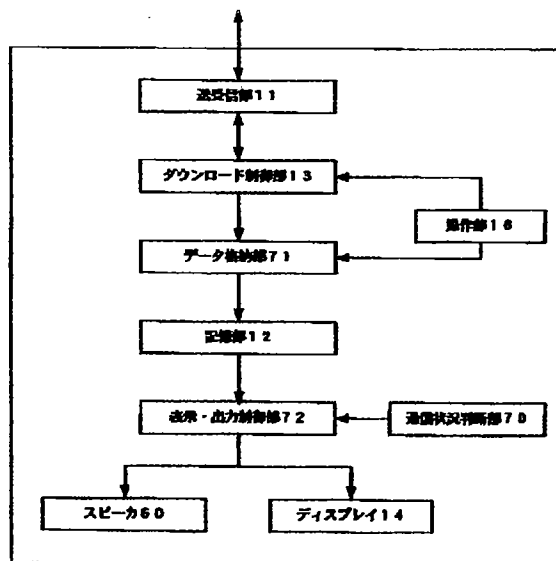
【図17】



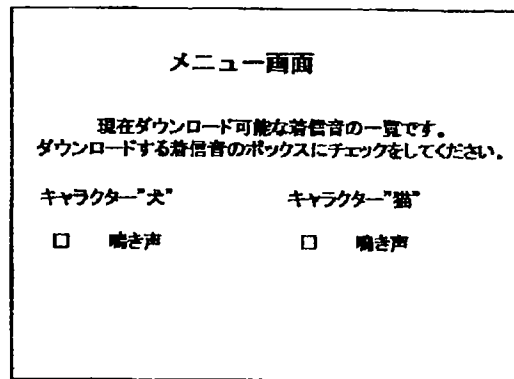
【図15】



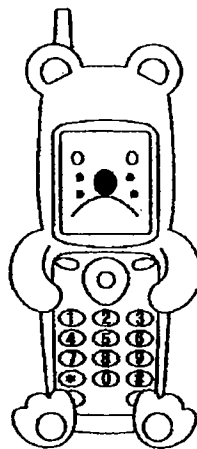
【図19】



【図16】

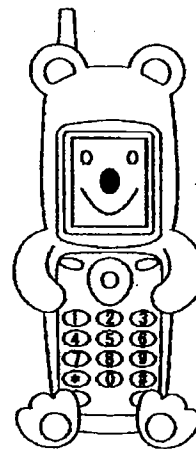


【図21】



泣き顔

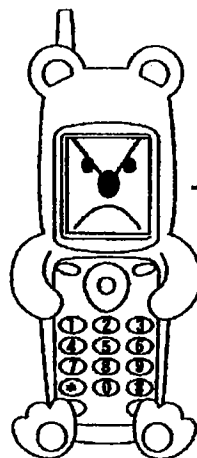
【図22】



笑顔

"ワン、ワン"

【図23】



怒顔

"ウーッ、ウーッ"

フロントページの続き

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RELATED PROCEEDINGS APPENDIX

None.